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Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
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1: /cgn2_6/ptodata/2,

2: /cgn2_6/ptodata/2,

3: /cgn2_6/ptodata/2,

4: /cgn2_6/ptodata/2,

5: /cgn2_6/ptodata/2,

6: /cgn2_6/ptodata/2,
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length: 2000000000
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Match Length
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/cgn2_6/ptodata/2/1aa/5B_COMB.pep:*
/cgn2_6/ptodata/2/1aa/6A_COMB.pep:*
/cgn2_6/ptodata/2/1aa/6B_COMB.pep:*
/cgn2_6/ptodata/2/1aa/6B_COMB.pep:*
/cgn2_6/ptodata/2/1aa/PCTUS_COMB.pep:*
/cgn2_6/ptodata/2/1aa/backfiles1.pep:*
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        GenCore version (c) 1993 - 2000
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3 US-08-431-184-6
3 US-08-431-184-6
3 US-08-431-184-6
5 PCT-US-93-02452-6
1 US-07-662-193-5
3 US-08-430-928C-8
3 US-08-430-928C-13
3 US-08-430-928C-13
3 US-08-430-928C-13
3 US-08-430-928C-14
13 US-08-430-928C-14
15 US-08-430-928C-14
16 US-08-431-184-13
18 US-08-430-928C-14
19 US-08-430-928C-14
19 US-08-430-928C-10
19 US-08-430-928C-10
19 US-08-431-184-13
19 US-08-431-184-14
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US-07-662-193-4
                                                                                                                                       US-07-662-193-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/662,193
FILING DATE: 19910228
CLASSIFICATION 514
PRIOR APPLICATION DATA:
PRIOR APPLICATION DATA:
OCCUPATION NUMBER: US 07/662,276
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 4, Application US/07662193
Patent No. 5328991
GENERAL INFORMATION:
APPLICANT: Kuo, Mei-chang
APPLICANT: Bond, Julian
TITLE OF INVENTION: Improved Preparation of Cat Dander
TITLE OF INVENTION: Allergens for Immunotherapeutic Purposes
NUMBER OF SEQUENCES: 8
CORRESPONDENCE ADDRESS:
ADDRESSEE: LAHIVE & COCKFIELD
STREET: 60 State Street, Suite 510
                                                                                                                                                                                                               TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 227-7400
TELEPAX: (617) 227-5941
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 111 amino acids
TYPE: AMINO ACID
                                                 Query Match
Best Local Similarity
                               Matches 111;
                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US 07/662,276
FILING DATE: 28-FEB-1991
ATTORNEY/AGENT INFORMATION:
NAME: Mandragouras, Amy E.
REGISTRATION NUMBER: P36,207
REFERENCE/DOCKET NUMBER: IML89-02AA/IPC-002CC/IMI-020
                                                                                                                                                         MOLECULE TYPE: FRAGMENT TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STREET:
CITY: BC
STATE: M
COUNTRY:
                                                                                                                                                                                                    TOPOLOGY:
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                                                 100.0%;
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US-08-431-184-16
US-08-431-184-16
US-07-662-193-6
US-08-300-948C-15
US-08-430-944D-15
US-08-430-944D-13
US-08-430-944D-13
US-08-430-944D-13
US-08-431-184-103
US-08-431-184-103
US-08-430-944D-19
US-08-431-184-19
US-08-431-184-19
US-08-430-944D-19
US-08-431-184-19
US-08-300-928C-57
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Result

Score

100.0

99 110 111 112 113 114 115 117 119 119 119 120 121 123 123 123

Conservative

Score 552; DB 1; Pred. No. 5.7e-64;

Length 111;

0;

0;

Mismatches

1100.0 100.0 10

Minimum Maximum

DB DB

Searched:

ALIGNMENTS

and Uses Thereof

Sequence

16, Appl 16, Appl 16, Appl 16, Appl 15, Appl 15, Appl 15, Appl 15, Appl 15, Appl 103, Appl 103, Appl 103, Appl 103, Appl 104, Appl 105, Appl 107, Appl 108, Appl 109, Appl 109, Appl 109, Appl 109, Appl 109, Appl 109, Appl

Scoring table: Sequence:

Title: Perfect score:

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RESULT 3
US-08-430-944D-6
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MEDIUM TYPE: Floppy disk
COMPUTER: IEM PC Compatible
COMPUTER: FLOPPY disk
COMPUTER: PC-DOS/MS-DOS
SOTTWARE: ASCII text
CURRENT APPLICATION DATA:
APPLICATION UNMBER: US/08/300,928C
FILING DATE: September 2, 1994
CLASSIFICATION DATA:
APPLICATION UNMBER: 07/807,529
FILING DATE: December 13, 1991
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: ANY E. MANURAGOURAS
REGISTRATION UNMBER: 36,207
REFERENCE/DOCKET NUMBER: 002.6US(
TELEPHONE: (617) 227-7400
TELEPAX: (617) 227-7540
TELEPAX: (617) 227-5941
INFORMATION FOR SEQ ID NO: 6:
SEQUENCE CHARACTERISTICS:
LENGRITH: 111 amino acids
TYPE: amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 2
US-08-300-928C-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-300-928C-6
                                Sequence 6, Application US/08430944D Patent No. 6025162 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 6, Application US/08300928C Patent No. 6019972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: GEFTER, Malcolm L. et al.
TITLE OF INVENTION: PEPTIDES FOR HUMAN T CELL REACTIVE FELINE
TITLE OF INVENTION: PROTEIN (TRFP)
NUMBER OF SEQUENCES: 101
CORRESPONDENCE ADDRESS:
ADDRESSEE: IMMILOGIC PHARMACEUTICAL CORPORATION
            APPLICANT: Bruce L. Rogers
                                                                                                                                                                              LENGTH: 111 amino acids
TYPE: amino acid
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CITY: WALTHAM
STATE: Massachusetts
                                                                                                                                                                                                                                                                     1 DTMRGALLVLALLVTQALGVKMAETCPTFYDVFFAVANGNELLLDLSLTKVNATEPERTA 60
                                                                                                                                                                                                                                                                                                1 DTMRGALLVLALLVTQALGVKMAETCPIFYDVFFAVANGNELLLLDLSLTKVNATEPERTA 60
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                                                                                                                                                                                                                                                                                                                                                           111;
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            et al.
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                                                                                                                                                                                                                                                                                                                                                         Score 552; DB 3;
Pred. No. 5.7e-64;
; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                Length 111;
                                                                                                                                                                                                                                                                                                                                                         Indels 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEFAX: (617)742-4214
INFORMATION FOR SEQ ID NO: 6:
SEQUENCE CHARACTERISTICS:
LENGTH: 111 amino acids
TYPE: amino acid
TOPOLOGY: 1 Incear
MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                      Sequence 6, Application US/08430014 Patent No. 6048962
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
Matches 111; Conserv
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FILING DATE: 28-APR-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/430,014
FILING DATE: 27-APR-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/300,928
FILING DATE: 02-SEPT-1994
ATTORNEY/AGENT INFORMATION:
NAME: Amy E. Mandragouras
REGISTRATION NUMBER: 35,207
REFERENCE/DOCKET NUMBER: MI-044DV2
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
APPLICANT: GEFTER
ZIP: 02145
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
CURRENT APPLICATION DATA:
                                                                                                                                                                            APPLICANT: GEFTER, Malcolm L. et al.
TITLE OF INVENTION: PEPTIDES FOR HUMAN T CELL REA
TITLE OF INVENTION: PROTEIN (TRFP)
NUMBER OF SEQUENCES: 101
CORRESPONDENCE ADDRESS:
ADDRESSEE: IMMULGGIC PHARMACEUTICAL CORPORATION
STREET: 610 LINCOLN STREET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION: A HUMAN T CELL REACTIVE FELINE PROTEIN
TITLE OF INVENTION:
NUMBER OF SEQUENCES: 103
CORRESPONDENCE ADDRESS:
ADDRESSES: LAHLYE & COCKFIELD, LLP
STREET: 28 State Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 MKKIQDCYVENGLISRYLDGLYMTTISSSKDCMGEAVQNTVEDLKLNTLGR 111
61 MKKIQDCYVENGLISRYLDGLYMTTISSSKDCMGEAVQNTVEDLKLNTLGR 111
61 MKKIQDCYVENGLISRYLDGLYMTTISSSKDCMGEAVQNTVEDLKLNTLGR 111
                                                                                                                   COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COUNTRY:
                                                                                                            : WALTHAM
E: Massachusetts
TRY: USA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 6, Application US/08431184 Patent No. 6120769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches 111;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEFAX: (617) 227-5941 INFORMATION FOR SEQ ID NO:
                              ATTORNEY/AGENT INFORMATION:
NAME: Amy E. Mandragouras
REGISTRATION NUMBER: 36,2
                                                                                                               PRIOR APPLICATION DATA:
APPLICATION NUMBER: U
FILING DATE: 27-APR-1
PRIOR APPLICATION DATA:
                                                                                                                                                                                                    SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/431,184
                                                                                                                                                                                                                                                                                        MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE CHARACTERISTICS:
LENGTH: 111 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATTORNEY/AGENT INFORMATION:
NAME: AMY E. MANDRAGOURAS
REGISTRATION NUMBER: 36,20
                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELECOMMUNICATION INFORMATION: TELEPHONE: (617) 227-7400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE: ASCII text CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY: 14mm
FELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61 MKKIQDCYVENGLISRVLDGLVMTTISSSKDCMGEAVQNTVEDLKLNTLGR 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: FILING DATE:
                                                                                APPLICATION NUMBER: US 08/300,928 FILING DATE: 02-SEPT-1994
                                                                                                                                                                                                                                                      COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CLASSIFICATION:
                                                                                                                                                                                       FILING DATE: 28-APR-1995
                                                                                                                                                                                                                                                                                                                                            COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                               ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61 MKKIQDCYVENGLISRVLDGLVMTTISSSKDCMGEAVQNTVEDLKLNTLGR 111
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US/08/430,014
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 DTMRGALLVLALLVTQALGVKMAETCPIFYDVFFAVANGNELLLDLSLTKVNATEPERTA 60
                 REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 DTMRGALLVLALLVTQALGVKMAETCPIFYDVFFAVANGNELLLDLSLTKVNATEPERTA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                h 100.0%; Score 552
Similarity 100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                Boston
                                                                                                                                                                                                                                                                                                                                                              Massachusetts
                                                                                                                                                                                                                                                                                                                                                                                             28 State Street
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                                                                                                                                                                                                                                                                                                                                            USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bruce L.
                                                                                                                                   27-APR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Rogers et al.
A HUMAN T CELL REACTIVE FELINE PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                   103
                                                                                                                                                   US 08/430,014
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ER: 002.6US(IMI-044)
                          36,207
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                IMI-044DV3
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---- No. 5.7e-64;
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US-07-807-529A-6
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; MOLECULE TYPE: protein US-07-807-529A-6
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                                                                                                                                                              PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/662,276
FILING DATE: 28-FEB-1991
APPLICATION NUMBER: US 07/431,565
FILING DATE: 03-NOV-1989
ATTORNEY/AGENT INFORMATION:
NAME: Channing, Stacey L.
REGISTRATION NUMBER: 31,095
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEFAX: (617)742-4214
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 111 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                 INFORMATION FOR SEQ ID NO:
                                                                                                                          REGISTRATION NUMBER: 31,095
REFERENCE/DOCKET NUMBER: IPC-027/imi-015
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                COMPUTER: IBM PC COMPATOR OPERATING SYSTEM: PC-DC SOFTWARE: ASCII TEXT CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                 MEDIUM TYPE: Floppy
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APPLICANT:
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                                                                                SEQUENCE CHARACTERISTICS:
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TITLE OF I
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
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CTTY: Cambridge
                               TOPOLOGY:
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                                                                                                                 TELEPHONE:
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                                                              LENGTH:
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                                           AMINO ACID
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                                                             109 amino acids
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bond, Julian F. Garman, Richard D.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (617)742-4214
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Rogers, Bruce L.
                                                                                                                                                                                                                                                                                                                                                                                                   IBM PC compatible
                                                                                                                 (617)
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                                                                                                                                                                                                                                                                                                                                                                                                                     Floppy disk
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                                                                                                                 494-0060
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PCT-US93-02462-6
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                                                                                                                 Query Match
Best Local Similarity
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Best Local Similarity
Matches 109; Conserv
                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 08/006,116

FILING DATE: 15-JAN-1993

APPLICATION NUMBER: US 07/884,718

FILING DATE: 15-MAY-1992

APPLICATION NUMBER: 07/857,311

FILING DATE: 25-MAR-1992

ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                   INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: IBM PC compat.
OPERATING SYSTEM: PC-DO:
SOFTWARE: ASCII TEXT
CURERNT APPLICATION DATA:
APPLICATION UNMERS: PCT-
FILING DATE: 19930325
                                                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS:
LENGTH: 109 amino acid
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                    TELECOMMUNICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: MOTVILLE, MALCOIM
TITLE OF INVENTION: PEPTIDES USEFUL FOR TOLERIZATION
NUMBER OF SEQUENCES: 14
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Garman, Richard D. APPLICANT: Greenstein, Julia L. APPLICANT: Kuo, Mei-chang
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STREET: 60 St
CITY: Boston
STATE: MA
 63
                                                                                                                                                                                                                                                                                                   REFERENCE/DOCKET NUMBER: IPSLECOMMUNICATION INFORMATION: TELEPHONE: (617) 227-7400
                                                                                                                                                                                                                                                                                                                                                   NAME: Mandragouras, Amy E. REGISTRATION NUMBER: 36,207
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ZIP: 02109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               63 KIODCYVENGLISRVLDGLVMTTISSSKOCMGRAVQNTVEDLKLNTLGR 111
61 KIODCYVENGLISRVLDGLVMTTISSSKDCMGEAVQNTVEDLKLNTLGR 109
                                                                                                                                                                                                                      TOPOLOGY:
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KIQDCYVENGLISRVLDGLVMTTISSSKDCMGEAVQNTVEDLKLNTLGR 111
                              MRGALLVLALLVTQALGVKMAETCPIFYDVFFAVANGNELLLDLSLTKVNATEPERTAMK 60
                                                                                                                                                                                                                                   AMINO ACID
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60 State Street
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Garman, Richard D.
                                                                                                  Conservative
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SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                    linear
                                                                                                               98.0%;
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100.0%; Pred. No. 1.5e-62;
tive 0; Mismatches 0;
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                                                                                            Score 541; DB 5; L
Pred. No. 1.5e-62;
""smatches 0;
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                                                                                                                               Length 109;
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US-08-300-928C-8
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Sequence 8, Application US/08300928C Patent No. 6019972 GENERAL INFORMATION:

Conservative

Indels

2; Gaps

1;

APPLICANT: GEFTER, Malcolm L. et al.
TITLE OF INVENTION: PEPTIDES FOR HUMAN T CELL
TITLE OF INVENTION: PROTEIN (TRFP)
NUMBER OF SEQUENCES: 101
CORRESPONDENCE ADDRESS:

REACTIVE FELINE

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TOPOLOGY: 1:
; MOLECULE TYPE:
; FRAGMENT TYPE:
US-07-662-193-5
                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: US/07/662,193
ETLING DATE: 19910228
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION DATA:
PRIOR APPLICATION NUMBER: US 07/662,276
ETLING DATE: 28 FEBL-1991
AFFORNEY/AGENT INFORMATION:
NAME: MANDIA HORNATION:
REGISTRATION NUMBER: P56,207
REGISTRATION NUMBER: P56,207
REFERENCE/DOCKET NUMBER: INL89-02AA/
TELECOMMUNICATION 1000 NUMBER: 1000 NU
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US-07-662-193-5
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                    Query Match
Best Local Similarity
Matches 104; Conserv
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APPLICANT: Kuo, Mei-chang
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APPLICANT: Bond, Julian
APPLICANT: Bond, Julian
TITLE OF INVENTION: Improved Preparation of Cat Dander
TITLE OF INVENTION: Allergens for Immunotherapeutic Purposes and Uses Thereof
NUMBER OF SEQUENCES: 8
NUMBER OF SEQUENCES: 8
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MEDIUM TYPE: Floppy disk
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STATE: MA
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internal
                                                  91.78;
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Score 506; DB 1; Le
Pred. No. 4.9e-58;
"" wismatches 2;
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                                                                                                                                                                                                                                                                                                                                         Sequence 8, Application US/08430944D Patent No. 6025162
GENERAL INFORMATION:
APPLICANT: Bruce L. Rogers et al.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches 104;
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            COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-OOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/430,944D
FILING DATE: 28-APR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOFTWARE: ASCII text
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US
                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TOPOLOGY: linear MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REGISTRATION NUMBER: 36,207
REFERENCE/DOCKET NUMBER: 002.6US(IMI-044)
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 227-7400
                                                                                                                                                                                                                                                                 TITLE OF INVENTION: A TITLE OF INVENTION: NUMBER OF SEQUENCES: 1 CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATTORNEY/AGENT INFORMATION: NAME: AMY E. MANDRAGOURA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
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PRIOR APPLICATION DATA:
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SOFTWARE: ASCII text
                                                                                                                                                               COUNTRY: U
ZIP: 02109
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 07/80 FILING DATE: December 13,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: S
CLASSIFICATION:
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                                                                                                                                                                                                                                                  ADDRESSEE:
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IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MANDRAGOURAS
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93.7%;
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A HUMAN T CELL REACTIVE FELINE PROTEIN
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er 13, 1991
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Pred. No. 4.9e-58;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Patent NU. ...
GENERAL INFORMATION:
GENERAL GEFTER, Malcolm L. et al.
APPLICANT: GEFTER, Malcolm L. et al.
APPLICANT: OF THE TRUE PETIDES FOR HUMAN T CELL REACTIVE FELINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches 104;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                     ATTORNEY/AGENT INFORMATION:
NAME: AMY E. MANDRAGOURAS
REGISTRATION NUMBER: 36,207
REFERENCE/DOCKET NUMBER: 002.
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 227-7400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEPHONE: (617)227-7400
TELEFAX: (617)742-4214
INFORMATION FOR SEQ ID NO: 8
                 TELEFAX: (617) 227-5941 INFORMATION FOR SEQ ID NO: 8: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                      COMPUTER: IBM PC COMPA
OPERATING SYSTEM: PC-D
SOFTWARE: ASCII text
CURRENT APPLICATION DATA:
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LENGTH: 109 amino acids
TYPE: amino acid
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CORRESPONDENCE ADDRESS:
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                                                                                                                                                                                       FILING DATE:
CLASSIFICATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME: Amy E. Mandragouras REGISTRATION NUMBER: 36,207
                                                                                                                                                                                                                                                                    CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TOPOLOGY:
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109 amino acids
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IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
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.93.7%;
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                                                                                                              002.6US(IMI-044)
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COMPUTER TEADABLE FORM:

COMPUTER TEADABLE FORM:

COMPUTER TEADABLE FORM:

COMPUTER: IBM PC COMPATIBLE

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PATCHION DATA:

APPLICATION NUMBER: US/08/431/184

FILING DATE: 28-ART-1955

PRIOR APPLICATION NUMBER: US 08/430,014

FILING DATE: 27-APR-1995

PRIOR APPLICATION NUMBER: US 08/430,014

FILING DATE: 127-APR-1995

APPLICATION NUMBER: US 08/430,014

FILING DATE: 07-SEPT-1994

ATTORNEY/AGENT INFORMATION:

APPLICATION NUMBER: US 08/430,928

ATTORNEY/AGENT INFORMATION:

REFERENCE/DOCKET NUMBER: 36,207

REFERENCE/DOCKET NUMBER: 36,207

REFERENCE/DOCKET NUMBER: 36,207

TELECOMMUNICATION INFORMATION:

TELEPHONE: (61)227-7400

TELEPHONE: (61)227-7400

TELEPHORE: (61)227-7400

T
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PATENTIAN INFORMATION:
APPLICANT: Bruce L
APPLICANT: MILE INFORMATION:
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; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-430-014-8
                                                                                                                                Query Match 91.7
Best Local Similarity 93.7
Matches 104; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 91.7
Best Local Similarity 93.7
Matches 104; Conservative
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TITLE OF INVENTION: A HUMAN T CELL REACTIVE FELINE PROTEIN
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES: 103
CORRESPONDENCE ADDRESS:
                             CITY: Boston
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE:
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o. 6120769
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93.7%;
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93.7%; Pred. No. 4.9e-58;
tive 3; Mismatches 2
                                                                                                                                                        Score 506; DB 3; Length 109; Pred. No. 4.9e-58;
                                                                                                                                   Mismatches
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                                                                                                                          Gaps
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Sequence 13, Application
Patent No. 6025162
GEMERAL INFORMATION:
APPLICANT: Bruce L. R
TITLE OF INVENTION: A
TITLE OF INVENTION: A
TITLE OF INVENTION: A
NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 13
US-08-300-928C-13
US-08-300-928C-13
: Sequence 13, Application US/08300928C
: Patent No. 6019972
: PAPPLICANT: GEFTER, Malcolm L. et
: APPLICANT: OF TNUFNITION: PEPTIDES FOR
                                                                                                                                                                       US-08-430-944D-13
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
; FRAGMENT TYPE: internal
US-08-300-928C-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CLASSIFICATION: 435

PRIOR APPLICATION: 435

APPLICATION UNMBER: 07/807,529

FILING DATE: December 13, 1991

CLASSIFICATION: 135

ATTORNEY/AGENT INFORMATION:

NAME: AMY E. MANDRAGOURAS

REGISTRATION NUMBER: 36,207

REFERENCE/DOCKET NUMBER: 002.6US(IMI-044)

TELECOMMUNICATION INFORMATION:

TELEPHONE: (617) 227-540

INFORMATION OF SED ID NO: 13:

SEQUENCE CHARACTERISTICS:

LENGTH: 92 amino acids

TYPEE: Entire 36,264
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Best Local
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ASCII text
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/300,928C
FILING DATE: September 2, 1994
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CORRESPONDENCE ADDRESS
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                                                                                                                             13, Application US/08430944D
6025162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
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: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     84.2%; Score 465; DB 3; ilarity 100.0%; Pred. No. 7.7e-53; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GEFTER, Malcolm L. et al.

ENTION: PEPFIDES FOR HUMAN T CELL REACTIVE FELINE
VENTION: PROTEIN (TREP)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IMMULOGIC PHARMACEUTICAL CORPORATION O LINCOLN STREET
                                            Rogers et al.
A HUMAN T CELL REACTIVE FELINE
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Indels

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CORRESPONDENCE ADDRESS:

ADDRESSEE:

STREET: 28 St CITY: Boston

28 State Street

LAHIVE & COCKFIELD, LLP

COUNTRY:

USA

Massachusetts

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                                                                                                                                                                                                                                                                          Sequence 13, Application US/08430014
Patent No. 6048962
GENERAL INFORMATION:
APPLICANT: GEFTER, Malcolm L. et
TITLE OF INVENTION: PEPTIDES FOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEFAX: (617)742-421.
INFORMATION FOR SEQ ID NO:
                                                                                                                STREET: VALUE OF THE CITY: WALTHAM CITY: MASSACHUSETTS
TISA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDIUM TYPE: Floppy disk
COMPOTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REGISTRATION NUMBER: 36,207
REFERENCE/DOCKET NUMBER: IM
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617)227-7400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: US/08/430,944D
FILING DATE: 28 APR-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/430,014
FILING DATE: 27-APR-1995
PRIOR APPLICATION NOTA:
APPLICATION NUMBER: US 08/300,928
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ZIP: 02109
COMPUTER READABLE FORM:
                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE: FRAGMENT TYPE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 02-SEPT-199. ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                        CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                         NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                             TITLE OF INVENTION:
CURRENT APPLICATION DATA:
           COMPUTER: IBM PC COMPATIBLE OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: ASCII text
                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       80 GLVMTTISSSKDCMGEAVQNTVEDLKLNTLGR 111
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME: Amy E. Mandragouras REGISTRATION NUMBER: 36,2
                                                                                                                                                                                                      ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1 VKMAETCPIFYDVFFAVANGNELLLDLSLTKVNATEPERTAMKKIQDCYVENGLISRVLD 60
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GY: linear
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                                                                                                                                                                                                    IMMULOGIC PHARMACEUTICAL CORPORATION
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internal
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PEPTIDES FOR HUMAN T CELL REACTIVE FELINE
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Pred. No. 7.7e-53;
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NAME: AMY E. MANDRAGOURAS
REGISTRATION NUMBER: 36,207
REFERENCE/DOCKET NUMBER: 002.
TELECOMMUNICATION INFORMATION:
TELECHONE: (617) 227-7400
TELECAX: (617) 227-5941
INFORMATION FOR SEQ ID NO: 13:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                   Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                          MOLECULE TYPE: FRAGMENT TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION DATA: APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                            TYPE: ami
TOPOLOGY:
                                                                    61 GLVMTTISSSKDCMGEAVQNTVEDLKLNTLGR 92
                                                                                      80 GLVMTTISSSKDCMGEAVQNTVEDLKLNTLGR 111
                                                                                                                                                      20 VKMAETCPIFYDVFFAVANGNELLLDLSLTKVNATEPERTAMKKIQDCYVENGLISRVLD 79
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                    1 VKMAETCPIFYDVFFAVANGNELLLDLSLTKVNATEPERTAMKKIQDCYVENGLISRVLD 60
                                                                                                                                                                                                                                                                                                                                                                             ENGTH:
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)GY: linear
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                                                                                                                                                                                                                                                                                                          peptide
internal
                                                                                                                                                                                                                     84.2%; Score 465; DB 3; 100.0%; Pred. No. 7.7e-53;
2002, 12:13:47
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Gaps

0;

Search completed: Job time: 109 sec

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Total number of hits satisfying chosen parameters:
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Minimum

DB DB seq length: 0 length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

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Database

PIR\_68:\*

score and is Pred. No. No. is the number of results predicted by chance to have a greater than or equal to the score of the result being printed, s derived by analysis of the total score distribution.

#### SUMMARIES

26 27 28 29	22 22 23 25	66 7 7 8 8 8 8 10 10 10 11 11 11 11 11 11 11 11 11 11	Result No.
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(EC 1 mA pr 1 prc - fa	leucyl aminopeptid peroxidase C2 prec extracellular prot DNA-directed RNA p probable nuclear m peroxidase (EC 1.1	000000000000000000000000000000000000000	Description major allergen Fel major cat allergen rhoptry protein

major allergen chain 2 precursor, short form - cat C;Species: Felis silvestris catus (domestic cat) C;Species: Pelis silvestris catus (domestic cat) C;Date: 31-Dec-1993 #sequence\_revision 31-Dec-1993 #text\_change 05-Nov-1999 C;Accession: JC1127 R;Griffith, I.J.; Craig, S.; Pollock, J.; Yu, X.B.; Morgenstern, J.P.; Rogers, Gene 113, 263-268, 1992

B.L.

Gene 113, 263-268, 1992 A;Title: Expression and genomic structure of the genes encoding FdI, the major allerg A;Reference number: JC1126; MUID:92241678

45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30
64	64.5	64.5	64.5	64.5	64.5	64.5	64.5	65	65	65	65	65	65	65	65
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	hypothetical prote	hypothetical prote	hypothetical prote	2-oxoglutarate deh	ORF MSV224 probabl	serine O-acetyltra	neutrophil-activat	protein kinase (EC	genome polyprotein	DNA-directed RNA p	Na+/H+ antiporter	Na+/H+-exchanging	probable periplasm	ACTA/ACTE family p	AIG1-like protein,

### ALIGNMENTS

R;Morgenstern, J.P.; Griffith, I.J.; Brauer, A.W.; Rogers, B.L.; Bond, J.F.; Chapman, Proc. Natl. Acad. Sci. U.S.A. 88, 9690-9694, 1991
A;Title: Amino acid sequence of Fel dI, the major allergen of the domestic cat: prote A; Reference number: A56413; MUID:92052157
A; A; Status: preliminary A;Title: Expression and genomic structure of the genes encoding FdI, the major allerg A;Reference number: JC1126; MUID:92241678
A;Accession: JC1145 A;Cross-references: GB:M77341; NID:g163822; PIDN:AAC41616.1; PID:g163823 R;Griffith, I.J.; Craig, S.; Pollock, J.; Yu, X.B.; Morgenstern, J.P.; Rogers, Gene 113, 263-268, 1992 major allergen Fel dI chain 2 precursor - cat
C;Species: Felis silvestris catus (domestic cat)
C;Date: 11-Aug-1995 #sequence\_revision 11-Aug-1995 #text\_change 01-Dec-2000
C;Date: 11-Aug-1995 #sequence\_revision 11-Aug-1995 #text\_change 01-Dec-2000
C;Accession: C56413 밁 ΩV 밁 Qy F:1-17/Domain: signal sequence \*status predicted <SIG> F:50/Binding site: carbohydrate (Asn) (covalent) \*status predicted A; Experimental source: salivary gland C; Keywords: glycoprotein F;1-17/Domain: signal sequence #statu A; Molecule type: mRNA A; Residues: 18-109 <GRI> A; Molecule type: mRNA A; Residues: 1-109 < MOR> A;Status: nucleic acid sequence not shown Matches 109; Query Match Best Local 9 Local Similarity 3 MRGALLVLALLVTQALGVKMAETCPIFYDVFFAVANGNELLLDLSLTKVNATEPERTAMK 62 MRGALLVLALLVTQALGVKMAETCPIFYDVFFAVANGNELLLDLSLTKVNATEPERTAMK 60 98.0%; ilarity 100.0%; Conservative 0; Score 541; Pred. No. Mismatches 7.1e-50; DB 2; 0; Length 109 Indels 0, Gaps 0; B.L.

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A;Accession: JC1127
A;Molecule type: DNA
A;Residues: 1-107 <GRI>
A;Experimental source: SKin
C:Genetics:
                                                                                                                                                                                                                               rhoptry protein - plasmodium yoelii (fragment)
C:Species: Plasmodium yoelii
C:Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change
C:Accession: T28676; A45521
R:Sinha, K.A.; Keen, J.K.; Ogun, S.A.; Holder, A.A.
Mol. Blochem. parasitol. 76, 329-332, 1996
A:Title: Comparison of two members of a multigene family coding
A:Reference number: Z20507; MUID:97077455
A:Accession: T28676
A;Molecule type: DNA
A;Residues: 1-2401 <SIN>
A;Residues: 1-2401 <SIN
A;Resen, J.; Holder, A.; Playfair, J.; Lockyer, M.; Lewis, A.

Mol. Blochem, Parasitol. 42, 241-246, 1990
A;Title: Identification of the gene for a Plasmodium yoelii rhoptry protein. Multiple
A;Reference number: A45521; MUID:91101660
A;Reference number: A45521; MUID:91101660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         major cat allergen Fel d I beta chain - cat (fragment)
C;Species: Felis silvestris catus (domestic cat)
C;Date: 12-May-1994 #sequence_revision 12-May-1994 #text_change 12-May-1994
C;Accession: B53283
R;Duffort, O.A.; Carreira, J.; Nitti, G.; Polo. F : Combardero u
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Mol. Immunol. 28, 301-309, 1991
A;Tille: Studdes on the biochemical structure of the major cat allergen Felis
A;Reference number: A53283; MUID:91287714
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C;Keywords: glycoprotein
C;Keywords: glycoprotein
F;1-17/Domain: signal sequence #status predicted <SIG>
F;18-107/Product: major allergen chain 2, short form #status predicted
F;50/Binding site: carbohydrate (Asn) (covalent) #status predicted
                                                                                                                                                                                                        A; Status: preliminary; translated from GB/EMBL/DDBJ
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A;Molecule type: protein
A;Residues: 1-20 <DUF>
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Matches 102;
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Best Local
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Pred. No. 4.8e-45;
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A; Accession: S42005 A; Molecule type: DNA A; Residues: 237-1050 <JA3>

A;Cross-references: EMBL:X75561

A;Reference number: S42004; MUID:94262329 A;Accession: S42005

rotein.

A; Title: Sequence analysis of a 3.5 Kb EcoRI fragment

from the

left arm of Saccharomy

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A;Cross-references: EMBL:228092; MIPS:YKL092c
A;Experimental source: strain S288C
R;Cxrckova, F: Nasmyth, K.
EMBO J. 12, 5277-5286, 1993
A;Title: Yeast G(1) cyclins CLN1 and CLN2 and a GAP-like protein have a role in A;Reference number: $41683; MUID:94085403
A;Accession: $41683; MUID:94085403
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTPASE-activating protein BUD2 - yeast (Saccharomyces cerevisiae)
GTPASE-activating protein CLA2; protein YKL092c; protein YKL424
C;Species: Saccharomyces cerevisiae
C;Date: 03-May-1994 #sequence_revision 03-May-1994 #text_change 29-Oct-1999
C;Accession: S36773; S37917; S37918; S41684; S39117; S42005; S34706
R;Park, H.O; Chant, J.; Herskowitz, I.
R;Park, H.O; Chant, J.; Herskowitz, I.
Nature 365, 269-274, 1993
A;Title: BUD2 encodes a GTPase-activating protein for Bud1/Rsr1 necessary for proper A;Reference number: S36773; MUID:93382538
A;Accession: S36773; MUID:93382538
A;Cross-references: EMBL:X75561; NID:g414687; R;James, C.M.; Gent, M.E.; Oliver, S.G. Yeast 10, 257-264, 1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Experimental source: strain S288C
R;James, C.M.; Gent, M.E.; Indge, K.J.; Oliver, S.G.
submitted to the Protein Sequence Database, March 1994
A;Reference number: S37918
A;Accession: S37918
A;Accession: S37918
A;Molecule type: DNA
A;Residues: 237-1104 <JAM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Cross-references: EMBL:L19162; NID:g402733; PIDN:AAA34461.1; R;Pohl, T.M.; Pohl, F.M. submitted to the Protein Sequence Database, March 1994 A;Reference number: S37897 A;Accession: S37917
                                                                             A; Molecule type: DNA
A; Residues: 237-1104 < JA2>
                                                                                                                                             submitted to the EMBL Data Library, October 1993 A;Reference number: S39116 A;Accession: S39117
                                                                                                                                                                                                                             A;MoLecule type: DNA
A;Residues: 1-436,'Y',438-1104 <CVR>
A;Cross-references: EMBL:X74130; NID
R;James, C.M.
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A; Residues: 1-681 < POH>
A; Cross-references: EMBL: Z28092; MIPS: YKL092c
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A; Residues: 1-1104 < PAR>
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A; Residues: 2260-2401 <KEE>
A; Cross-references: GB: M34281
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Best Local S
Matches 27
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           34 FAVANGNELLLDLSLTKV-NATEPERTAMKKIQDCYVE-NGLISRVLDGLVMTTISSSKD 91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 92 CMGEAVQNTVEDLKLNT 108
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27; Conservative
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                                                                                                                                                                                                                                                       NID: g395287; PIDN: CAA52228.1;
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Pred. No. 19;
l2; Mismatches
                                                         PIDN:CAA53241.1;
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                                                         PID:g414689
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                                                                                                                                                                                                                                                       PID: g395289
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C;Genetics:
A;Genetics:
A;Gene: guaB
C;Function:
A;Description:
A;Description:
A;Description:
Cstalyzes the oxidation of inosine 5'-phosphate by NAD and one molewal;Description:
A;Description:
Cstalyzes the inosynthesis
C;Superfamily: IMP dehydrogenase;CBS homology; IMP dehydrogenase amino-terminal huckston;GMP biosynthesis; NAD; oxidoreductase; purine nucleotide lc;Reywords: duplication;GMP biosynthesis; NAD; oxidoreductase; purine nucleotide lc;Reywords: duplication;GMP biosynthesis;NAD; oxidoreductase; purine nucleotide lc;Reywords: duplication;GMP biosynthesis; duplication;GMP biosynthesis; duplication;GMP biosynthesis; duplication;GMP biosynthesis; duplica
                        RESULT 7

B86712

G:Species: Lactococcus lactis subsp. lactis
G:Species: Lactococcus lactis subsp. lactis
G:Date: 23-Mar-2001 #sequence_revision 23-Mar-2001 #text_change 31-Mar-2001
C:Accession: D86712
G:Accession: D86712
R:Bolotin, A.; Wincker, P.; Mauger, S.; Jaillon, O.; Malarme, K.; Weissenback
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IMP dehydrogenase (EC 1.1.1.205) [similarity] - Chlorobium
N;Alternate names: guaBl protein; IMP:NAD+ oxidoreductase;
C;Species: Chlorobium vibrioforme
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A;Molecule type: DNA
A;Residues: 1-521 <PET>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C;Date: 05-May-2000 #sequence_revision 05-May-2000 #text_change 16-Jun-2000 C;Accession: T17196
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A;Cross-references: SGD
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   Res
                                                                                                                                                                                                                                                                                                                                                                                                                                                             54 TEPERTAMKKIQDC-----YVENGLISRV----LDGLVMTTISSSKDCMGEAVQNTVED
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Pred. No. 9.6;
9; Mismatches
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9.6;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      25;
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                           Weissenbach,
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A; Gene: glgP
C; Superfamily: p
C; Keywords: gly
                          C;Species: Synechocystis sp.
A; Variety: PCC 6803
C;Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 16-Jun-2000
C;Accession: S77037
C;Accession: S77037
R;Kaneko, T.; Sato, S.; Kotani, H.; Tanaka, A.; Asamizu, E.; Nakamura, Y.; P.
C, K.; Okumura, S.; Shimpo, S.; Takeuchi, C.; Wada, T.; Watanabe, A.; Yamadi nna Res. 3, 109-136, 1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Cross-references:
A;Experimental sourc
C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Title: The complete genome A;Reference number: A86625 A;Accession: D86712
                                                                                                                                                                                       RESULT
S77037
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C;Accession: A28668; S61500
R;Haber, L.T.; Pang, P.P.; Sobell
J. Bacteriol. 170, 197-202, 1988
A;Title: Nucleotide sequence of t
A;Reference number: A28668; MUID:
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A;Title: A 40 kb chromosomal fragment encoding A;Reference number: S61499; MUID:95302986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Cross-references: GB:M18965; NID:g154187; I
A;Note: the authors translated the codon CAG
R;Mills, D.M.; Bajaj, V.; Lee, C.A.
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A;Reference number:
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A; Residues: 1-853 <MIL>
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A; Status: preliminary
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C;Date: 28-Aug-1989 #sequence_revision 28-Aug-1989 #text_change 29-Sep-1999
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                                                                                                                                                                     hypothetical protein slr0697 -
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ce: strain IL1403
S74322; MUID:97061201
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G for residue
                                 the unicellular cyanobacterium Synechocys
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RESULT 11

T00641
C;Species: Arabidopsis thaliana (mouse-ear cress)
C;Species: Arabidopsis thaliana (mouse-ear cress)
C;Date: 01-Feb-1999 #sequence_revision 01-Feb-1999 #text_change 08-Sep-2000
C;Accession: T00641
R;Federspiel. N.A.; Palm, C.J.; Conway, A.B.; Kurtz, D.B.; Conway, A.R.; Au,
; Vysorskaia, V.S.; Yu. G.; Ecker; J.; Theologis, A.; Davis, R.W.
submitted to the EMBL Data Library, February 1998
A;Reference number: Z14197
A;Accession: T00641
A,Status: translated from GB/EMBL/DDBJ
A;Residues: 1-388 (FED)
A;Cross-references: EMBL:AC002396; NID:92749918; PIDN:AAC00571.1; PID:928865;
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A; Molecule type: DNA
A; Residues: 1-295 CARN>
A; Residues: 1-295 CARN>
A; Cross-references: GB: AE001811; GB: AE000512; NID: g4982291; PIDN: AAD36783.1; PID: g498229
A; Experimental source: strain MSB8
C; Genetics:
A; Gene: TM1717
C; Superfamily: conserved hypothetical protein HI1714
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A;Title: Evidence for lateral gene transfer between A;Reference number: A72200; MUID:99287316
A;Accession: A72219
A;Status: preliminary
A;Molecule type: DNA
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A;Residues: 1-1252 <KAN>
A;Cross-references: EMBL:D64005; GB:AB001339;
A;Note: the nucleotide sequence was submitted
C;Superfamily: hypothetical protein YKL215c
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Status: nucleic a
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Pred. No. 7.1;
9; Mismatches
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                   NID:g2749918; PIDN:AAC00571.1; PID:g28865; GSPDB:GN00
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on, D.;
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RESULT 13 154964 DNA mismatch repair protein [imported] •

Escherichia coli

Дb QΥ ₽ Q

63 FIDALGRTPKRIKGAVSSSEQSTAHLKQHGIEVLELNHTG 78 -LDGLVMT-----TISSSKDCMGEAVQNTVEDLKLNTLG 110

102

Query Match Best Local

l Similarity 27. 27; Conservative

12.7%; 27.0%; 13;

Score 70; DB 2; Length 245 Pred. No. 6.5; indels 22; Indels

38;

Gaps

4

47 SLTKVNATEP-----

5 TVTRVNSTQPANACAPSHIPIIINNPMSEAKRRAAEKAIE--YVENDMIIGVGTGSTVAY 62

-----ERTAMKKIQDCYVENGLISRV-----

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A; Molecule type: DNA
A; Residues: 1-245 < SIM>
A; Residues: 1-245 < SIM
A; Residues:
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A;Title: The genome sequence of the plant pathogen Xylella fastidiosa. A;Reference number: A82515; MUID:20365717
A;Note: for a complete list of authors see reference number A59328 below A;Accession: D82610
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 \begin{array}{lll} A; Gene: & xF2015 \\ C; Superfamily: & Haemophilus & influenzae & ribose-5-phosphate & isomerase \\ \end{array} 
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24; Conservative
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Pred. No. 9
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A;Title: The Escherichia coli fdv gene probably encodes A;Reference number: I54964; MUID:92041649
A;Accession: I54964
A;Status.
                                                                                                              A:Status: preliminary
A:Molecule type: DNA
A:Molecule type: DNA
A:Residues: 1-853 <STO>
A:Cross-references: GB:AE005174; NID:g12517186; PIDN:AAG57842.1; GSPDB:GN00145; UWGP:Z40
A:Experimental source: strain O157:H7, substrain EDL933
C:Genetics:
A:Genet muts
C:Superfamily: DNA mismatch repair protein muts
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C;Date: 07-Jun-1996 #sequence_revision 07-Jun-1996 #text_change 17-Nov-2000
C;Accession: I54964; A65054; T44995
R;Schlensog, V; Boeck, A.
                                                                                                                                                                                                                                                                                                                             A;Title: Genome sequence of enterohemorrhagic Escherichia coli 0157:H7 A;Reference number: A85480; MUID:21074935; PMID:11206551 A;Accession: F85922
                                                                                                                                                                                                                                                                                                                                                                                                    methyl-directed mismatch repair [imported] - Escherichia coli (strain 0157:H7) C;Species: Escherichia coli (c;Date: 16-Feb-2001 #sequence_revision 16-Feb-2001 #text_change 31-Mar-2001 C;Accession: F85922 C;Accession: F85922 R;Perna, N.T.; Plunkett III, G.; Burland, V.; Mau, B.; Glasner, J.D.; Rose, D. iller, L.; Grotbeck, E.J.; Davis, N.W.; Lim, A.; Dimalanta, E.; Potamousis, K. Nature 409, 529-533, 2001
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C; Superfamily:
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A; Residues: 1-18, 'K', 20-336, 'E', 338-853 <CAR>
A; Croos-references: EMBL: AJ006210; PIDN: CAB43497.1
A; Experimental source: strain O157:H7
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A;Reference number: A64720; MUID:97426617
A;Accession: A65054
A;Status: preliminary; nucleic acid sequence not shown; translation not shown A;Molecule type: DNA
A;Residues: 1-853 <BLAT>
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; Pred. No. 35;
5; Mismatches
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Pred. No.
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A;Cross-references: EMBL:U73619; PIDN:AAB18239.1
A;Note: cofactor vitamine B12
C;Superfamily: herpesvirus ribonucleoside-diphosphate reductase large chain C;Keywords: oxidoreductase
                                                                                                                                                                                                                                                                                                                                                                                                       R:Tauer, A.; Benner, S.A. 94, 53-58, 1997
Proc. Natl. Acad. Sci. U.S.A. 94, 53-58, 1997
A;Title: The B12-dependent ribonucleotide red
A;Reference number: Z21699; MUID:97144393
A;Accession: T37459
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82 VAKSYILYREKRRAIREEKELMG-----VKDDLKL 111
                                      86 ISSS--
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                                                                                                                  30 YDVFFAVANGN----ELLLDLSLTKVNATEPERTAMKKIQDCYVENGLISRVLDGLVMTT 85
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                                                                            YKAMLSVKNGTMKDAEQLADKVVARLK--DKERPSVEEIQD-VVEDVLMTSKIDGKTFTD 81
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                                                                                                                                                            26;
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                                                                                                                                                                               12.5%;
27.4%;
                                   -KDCMGEAVQNTVEDLKL 106
                                                                                                                                                          17;
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Run on:
                                                                                                               OM protein - protein search, using sw model
May '7, 2002, 12:13:48 ; Search time 11.68 Seconds (without alignments) 348.441 Million cell updates/sec
                                                                                                                                                                                            GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd.
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Title: Perfect score: US-09-662-784-6 552

Sequence: DTMRGALLVLALLVTQALGV......CMGEAVQNTVEDLKLNTLGR 111

Scoring table:

BLOSUM62 Gapop 10.0 , Gapext 0.5

Searched: 100059 seqs, 36664827 residues

Total number of hits satisfying chosen parameters: 100059

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database : SwissProt\_39:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

13 15 16 17 18 19 19 20 21 22 22 23 24 25 26 27 28 33 33		Result No.
6.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5.5	· 6666 · 66777774 ·	Score
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468 1310 870 1390 2412 4128 4116 916 917 481 1116 917 481 1116 1116 1116 1116 1116 1116 1116	109 1247 1104 521 854 853 853 375 520 520 587 1343	Length
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HEM1_MYCTU ACNI_HUMAN NHAB_HAEIN RPB1_METTH RPB1_MYCGA POL1_BAYMG PRKD_MOUSE S2.05_HUMAN ODO1_RICPR YK54_AQUAE RR8_CHLVU C3X1_HUMAN 6PGD_CERCA AGM1_ARATH ERA_TREPA IHBC_RAT PGK_PLAFA SCA4_RICJA RR8_CYAPA NAPH_ECOLI NAPH_ECOLI	FEL2_FELCA IF3X_CAEEL BUD2_YEAST IMDH_CHLVI MUTS_SALTY MUTS_ECOLI MPA1_CHAOB AMPL_ARATH BAR1_YEAST RPOB_HAEIN PERB_ARMRU	ID
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# ALIGNMENTS

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01-FEB-1994
01-FEB-1994
30-MAY-2000
Wilson R., Ainscough R., Anderson K., Baynes C., Berks M.,
Bonfield J., Burton J., Connell M., Copsey T., Cooper J., Coulson A.
Craxton M., Dear S., Du Z., Durbin R., Favello A., Fraser A.,
Fulton L., Gardner A., Green P., Hawkins T., Hillier L., Jier M.,
Johnston L., Jones M., Kershaw J., Kirsten J., Laisster N.,
Latreille P., Lightning J., Lloyd C., Mortmore B., O'Callaghan M.,
Latreille P., Lightning J., Lloyd C., Mortmore B., O'Callaghan M.,
Parsons J., Percy C., Rifken L., Roopra A., Saunders D., Shownkeen is
Suns M., Smaldon N., Smith A., Smith M., Sonnhammer E., Staden R.,
Sulston J., Thjerry-Mieg J., Thomas K., Vaudin M., Vaughan K.,
Waterson R., Watson A., Weinstock L., Wilkinson-Sproat J.,
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Eukaryota: Metazoa; Nematoda; Chromadorea; Rhabditida; Rhabditoidea;
Rhabditidae; Peloderinae; Caenorhabditis.
NCBI_TaxID=6239;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   between the Swiss Institute of Bioinformatics and the EMBL outstation -
the European Bioinformatics Institute. There are no restrictions on its
use by non-profit institutions as long as its content is in no way
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entitles requires a license agreement (See http://www.isb-sib.ch/announce/
or send an email to license(isb-sib.ch).
                                                                                                                                                                                                                               STRAIN-BRISTOL N2;
MEDLINE=94150718; PubMed=7906398;
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01-FEB-1994 (Rel. 28, Last sequence update)
30-MAY-2000 (Rel. 39, Last abnotation update)
PUTATIVE EUKARYOTIC TRANSLATION INITIATION FACTOR 3 SUBUNIT (EIF-3).
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EMBL; X62478; CAA44345.1; -
                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
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JC1145.
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N-LINSTED (GLCNAC. . .).

T -> PSTENTAWYKOFRTP (IN ISOFORM CH2ST).

HISSING (IN CH2SV).

I -> V (IN CH2SV).

RV -> KF (IN CH2SV).

RV -> KF (IN CH2S AND CH2SV).

S -> N (IN CH2S AND CH2SV).

S -> V (IN CH2S).

S -> V (IN CH2S).

N -> Y (IN CH2S).

MISSING (IN CH2S).

N -> Y (IN CH2SV).

N -> Y (IN CH2SV).
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Pred. No. 2.9e-50;
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78 LDGLVMTTISSSKDCMGEAVQNTVEDLKLNTLG 110

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Best Local S
Matches 26
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EMBL; 222176; CAA81605.1; J
EMBL; 222176; CAA810143.1; J
EMBL; 227080; CAA80143.1; J
WormPep; F55H2.6; CE00213.
Hypothetical protech; Initial SEQUENCE 1247 AA; 139920
                                                                                                                                                                                                                                                                                                                                                                                                                               Wohldman P.;

"2.2 Mb of contiguous nucleotide sequence from chromosome III of elegans.";

elegans.";

Nature 368:32-38(1994).

-1- FUNCTION: BINDS TO THE 40S RIBOSOME AND PROMOTES THE BINDING METHIONYL-TRNAI AND MENA (BY SIMILARITY).

-1- SUBUNIT: EIF-3 IS COMPOSED OF AT LEAST 10 DIFFERENT SUBUNITS SIMILARITY).

-1- SIMILARITY: BELONGS TO THE EIF-3 P135 FAMILY.
                                                                                                                                                                                                                                                                                       This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
  384 IHADYVNAAARGVQSILDGNILAINPGEDKKTHM-----
                              28 IFYDVFFAVANGNELLLDLSLTKVNATEPERTAMKKIQDCYVENGLI-----SRV 77
                                                                                      Similarity
                                                                                                                                                          al protein; Initiation factor; Protein biosynthesis 1247 AA; 139920 MW; CF44F3EF27D8774F CRC64;
                                                                     Conservative
                                                                                  14.1%;
28.0%;
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                                                                   14;
                                                                 Score 78; DB:
Pred. No. 2.9;
14; Mismatches
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  YIWNNIFFSLGFDVRDHYKE
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ID BUD2_Y
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AC P33314
DT 01-FBB
DT 01-JUN
DT 20-AUG
DE INHIBID
OS SACCHA
OC EUKARY
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RN EDUDEN
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RX PARK PARK MEDLIN
RX PARK PARK MEDLIN
RX PARK PARK POPPER
RT "BUD2
RT PROPER
RT PROPER
RT NATURE
RN SEQUEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BUD2_YEAST
P33314;
01-FEB-1994
01-JUN-1994
20-AUG-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-FEB-1994 (Rel. 28, Created)
01-JUN-1994 (Rel. 29, Last sequence update)
10-JUN-1994 (Rel. 40, Last annotation update)
20-AUG-2001 (Rel. 40, Last annotation update)
INHIBITORY REGULATOR PROTEIN BUD2/CLA2.
BUD2 OR CLA2 OR ERC25 OR YKL092C OR YKL424.
Saccharomyces cerevisiae (Baker's yeast).
Eukaryota; Fungi; Ascomycota; Saccharomycotina; Saccharomycetes;
Saccharomycetales; Saccharomycetaceae; Saccharomyces.
                                                                                                                                SEQUENCE FROM N. A.

MEDLINE-9382538; PubMed-8371782;

Park H.-O., Chant J., Herskowitz I.;

"BUD2 encodes a GTPase-activating protein proper bud-site selection in yeast.";

Nature 365:269-274(1993).
                                                                                                                                                                                                                                                                                                             Cvrckova F., Nasmyth K.; "Yeast G1 cyclins CLN1 and CLN2 and a bud formation.";
                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
MEDLINE-94085403; PubMed-8262070;
                                                                                                                                                                                                                                                                                         EMBO J. 12:5277-5286(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=4932;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          438 LGGDAAAFAATSTDLQGVRAFATLDDPKLNTLG
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SEQUENCE OF 237-1104 FROM N.A. Submitted (MAR-1994) to the SEQUENCE OF 1-681 FROM N.A. Pohl T.M.;

EMBL/GenBank/DDBJ databases

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Interpro; IPR001936; RasGAP.
Interpro; IPR001936; RasGAP.
Interpro; IPR001936; RasGAP.
Interpro; IPR001936; RasGAP; 1.
SMART; SM00233; RasGAP; 1.
SMART; SM00323; RasGAP; 1.
PROSITE; PS00049; C2_DOMAIN_1; FALSE_NEG.
PROSITE; PS50016; RAS_GTPASE_ACTIV_1; 1.
PROSITE; PS50018; RAS_GTPASE_ACTIV_2; 1.
                                                                                                                                                                                                                                                                              IMDH_CHLVI STANDARD; PRT; 521 AA. 050316; 15-DEC-1998 (Rel. 37, Created) 15-DEC-1998 (Rel. 37, Last sequence update) 15-DEC-1998 (Rel. 37, Last annotation update) 15-DEC-1998 (Rel. 37, Last annotation update) 11-DEC-1998 (Rel. 37, Last annotation updat
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PIR;
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                                                                                                                                                           Chlorobium vibrioforme
Bacteria; Green sulfur
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or send an
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James C.M., Gent 1
                              SEQUENCE FROM N.A. STRAIN-F. THIOSULF
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SILTKSIEQYFFRVGNEYLSKALSAILKEIIESNKSC
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B.L.,
                              THIOSULFATOPHILUM NCIB
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 profit institutions as long
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   Moeller
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AA;
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1099
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21 RAS-GAP.

99 POLY-SER.

99 POLY-LYS.

37 N -> Y (IN REF. 1).

126662 MW; 451AFC3A78384760 CRC64;
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23.7%;
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M.G.,
                                                                                                                                                              bacteria;
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Stummann B.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                 8327;
                                                                                                                                                                  Chlorobium
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8.4;
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Henningsen K.W.;
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Best Local S
Matches 21
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InterPro; IPR003009; FMN_enzyme.
InterPro; IPR001093; IMP_DH_GMP_RED.
Pfam; pr00571; CBS; 2.
Pfam; pr00478; IMPDH_C; 1.
Pfam; pr01574; IMPDH_N; 1.
SMART; SM00116; CBS; 2.
                                                                                                                                                                                                                                                                                                                          01-MAR-1989 (
01-OCT-1993 (
20-AUG-2001 (
DNA MISMATCH
                                                                                                                                                                                                                                                                                                                                                                                                                                                           LT 5
SALTY
                                                           SEQUENCE FROM N.A., AND SEQUENCE OF 1-5.
MEDLINE-88086868; PubMed-3275609;
Haber L.T., Pang P.P., Sobell D.I., Mankovich J.A., Walk
"Nucleotide sequence of the Salmonella typhimurium muts
for mismatch repair: homology of Muts and Hexa of Strept
pneumoniae.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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MUTAGENESIS,
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                                             J. Bacteriol.
                                                                                                                                                                                                                 NCBI_TaxID=602;
                                                                                                                                                                                                                                          Salmonella
                                                                                                                                                                                                                                                              Bacteria;
                                                                                                                                                                                                                                                                                   Salmonella
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     XANTHOSINE 5'-PHOSPHATE + NADH.

PATHWAY: FIRST REACTION UNIQUE TO GMP BIOSYNTHESIS SUBUNIT: HOMOTETRAMER (BY SIMILARITY).
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Similarity 32.3%;
21; Conservative
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                                                                                                                                                                                                                                                              Proteobacteria;
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336
521 AA;
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(Rel. 27, Last sequence update)
(Rel. 40, Last annotation update)
H REPAIR PROTEIN MUTS.
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  AND
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                                        170:197-202(1988)
                                                                                                                                                                                                                                                                                                                                                                                                                                       STANDARD;
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  ATP-BINDING
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CBS 2.
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; 0065FCCBC182815A CRC64;
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                                                                                                                                                                                                                                                              subdivision;
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                                                                                      HexA of Streptococcus
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                                                                                                                                                                                                                                                              Enterobacteriaceae;
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                                                                                                        ker G.
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Best Local S
Matches 21
                                                                                                  AUTS ECO57 STANDARD;
Q956P8;
20-AUG-2001 (Rel. 40, Created)
20-AUG-2001 (Rel. 40, Last sequence
20-AUG-2001 (Rel. 40, Last annotati
DNA MISMATCH REPAIR PROTEIN MUTS.
MUTS OR FDV OR Z4043 OR EC3589.
Escherichia coli 0157:H7.
Bacteria; Proteobacteria; gamma sub
                                                                                                                                                                                                                                                                      LT 6
_ECO57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PROSITE; PS00486; DNA_MISMATCH_REPAIR_2; 1.

DNA repair; ATP-binding; DNA-binding; DNA-binding; DNA-binding; DNA-binding; DNA-constant in the policy of the 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ProDom;
SMART;
SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license(isb-sib.ch).
                SEQUENCE FROM N
STRAIN=0157:H7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   StyGene; SG10237; mutS.
InterPro; IPR000433; MutS_C.
InterPro; IPR002863; MutS_N,
Pfam; PF00488; MutS_C; 1.
Pfam; PF01624; MutS_N; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL; M18965
PIR; A28668;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Haber L.T., Walker G.C.;

Hatering the conserved nucleotide binding motif in the Salmonella typhimurium MutS mismatch repair protein affects both its ATPase and mismatch binding activities.

EMBO J. 10:2707-2715(1991).
                                                                                          Escherichia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL; U16303; AAA80578.1; -. EMBL; M18965; AAA27167.1; -.
                                                                   NCBI_TaxID=83334;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE=94087727; PubMed=7903399;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Detecting frame shifts by
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                                                                                                                                                                                                                                                                                                                                              38
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     tecting frame shifts by amino acid sequence comparison.";
MO1. Biol. 234:1140-1157(1993).
FUNCTION: THIS PROTEIN IS INVOLVED IN THE REPAIR OF MISMATCHES
IN DNA. IT IS POSSIBLE THAT IT CARRY OUT THE MISMATCH RECOGNITION
STEP. THIS PROTEIN HAS A MEAK APPASE ACTIVITY.
SIMILARITY: BELONGS TO THE DNA MISMATCH REPAIR MUTS FAMILY.
                                                                                                                                                                                                                                                                                                                                          FYDVEFAVANGNELLLDLSLTKVNATEPERTAMKKIQDCYVENGLISRYLDG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; PD001263; Muts_C;
SM00534; MUTSac; 1
SM00533; MUTSd; 1.
    J.E.,
                                                                                                                                                                                                                                                                                                                                                                                                                Similarity 40.
21; Conservative
                                N.A.
  Li B.,
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  Payne
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                                                                                                        gamma subdivision;
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                                                                                                                                                                                                                                                                                                                                                                                                              Score 71; DB Pred. No. 10; 5; Mismatches
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                                                                                                                                                                                                                                                    PRT;
  Cebula T.A.;
                                                                                                                                                                                              update)
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                                                                                                        Enterobacteriaceae;
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36 FYELFYDDAKRASQLLDISLTKRGASAGEPIPMAGIPYHAVENYLAKLVNQG
                              29 FYDVFFAVANGNELLLDLSLTKVNATEPERTAMKKIQDCYVENGLISRVLDG
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EMBL; U69873; AAB97931.1; --
EMBL; AJ006210; CAB43497.1; --
EMBL; AE005501; AAG57842.1; --
EMBL; AP002562; BAB37012.1; --
InterPro; IPR000432; MutS_C.
InterPro; IPR002863; MutS_N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRAIN-015:H7 / RIMD 0509952;

MEDLING-21156231; PubMed=11258796;

Hayashi T., Makino K., Ohnishi M., Kurokawa K., Ishii K., Yokoyama K.,

Han C.-G., Ohtsubo E., Nakayama K., Murata T., Tanaka M., Tobe T.,

Ilda T., Takami H., Honda T., Sasakawa C., Ogasawara N., Yasunaga T.,

Kuhara S., Shiba T., Hattori M., Shinagawa H.;

"Complete genome sequence of enterohemorrhagic Escherichia coli

"Complete genomic comparison with a laboratory strain K-12.";

DNA Res. 8:11-22(2001).

IN DNA, IT IS PROTEIN IS INVOLVED IN THE REPAIR OF MISMATCHES

IN DNA, IT IS POSSIBLE THAT IT CARRY OUT THE MISMATCH RECOGNITION

STEP. THIS PROTEIN HAS A WEAK ATPASE ACTIVITY

STEP. THIS PROTEIN HAS A WEAK ATPASE ACTIVITY

--- SIMILARITY: BELONGS TO THE DNA MISMATCH REPAIR MUTS FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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MEDLINE-21074935; PubMed-11206551;

Perna N.T., Plunkett G. III, Burland V., Mau B., Glasner J.D.,

Rose D.J., Mayhew G.F., Evans P.S., Gregor J., Kirkpatrick H.A.,

Posfal G., Hackett J., Klink S., Boutin A., Shao Y., Miller L.,

Grotbeck E.J., Davis N.W., Lim A., Dimalanta E.T., Potamousis K.,

Apodaca J., Anantharaman T.S., Lin J., Yen G., Schwartz D.C.,

Welch R.A., Blattner F.R.;

"Genome sequence of enterohaemorrhagic Escherichia coli 0157:H7."

Nature 409:529-533(2001).
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"Comparison of the mut5-rpoS region from Escherichia coli 0157:H7,
"Comparison of the mut5-rpoS region from Escherichia coli 0157:H7,
Verocytotoxin-containing and non-verocytotoxin-containing E.coli.";
Submitted (MAY-1998) to the EMBL/GenBank/DDBJ databases.
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                                                                                                                                                                                                            CRC64;
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Length 853

Indels

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RESULT 7
    EMBL;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Submitted (MAY-1997) to the EMBL/GenBank/DDBJ databases.
-I- FUNCTION: THIS PROTEIN IS INVOLVED IN THE REPAIR OF MISMATCHES IN DNA. IT IS POSSIBLE THAT IT CARRY OUT THE MISMATCH RECOGNIT.
STEP. THIS PROTEIN HAS A WEAK ATPASE ACTIVITY.
-I- SIMILARITY: BELONGS TO THE DNA MISMATCH REPAIR MUTS FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Blattner F.R., Plunkett G. III, Bloch C.A., Perna N.T., Burland V., Riley M., Collado-Vides J., Glasner J.D., Rode C.K., Mayhew G.F., Gregor J., Davis N.W., Kirkpatrick H.A., Goeden M.A., Rose D.J., Mau B., Shao Y.;
"The complete genome sequence of Escherichia coli K-12."; Science 277:1453-1474(1997).
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01-MAR-1992 (Rel. 21, Created)
01-MAR-1992 (Rel. 21, Last sequence up
20-AUG-2001 (Rel. 40, Last annotation
DNA MISMATCH REPAIR PROTEIN MUTS:
                       EMBL;
EMBL;
EMBL;
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EMBL;
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MEDLINE=97426617; Pu
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       entities requires a license agreement (S or send an email to license@isb-sib.ch).
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Schlensog V., Boed
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                                   M64730; AAA24188.1; U29579; AAA69243.1; -...
AE000357; AAC75775.1; AF0004287; AAD01197.1; AF001987; AAD00922.1; AF001990; AAD00923.1; AF001991; AAD00925.1; AF001992; AAD00925.1; AF001993; AAD00926.1; AF001993; AAD00926.1; AF001993; AAD00927.1; AF001995; AAD00929.1; AF001996; AAD00929.1; AAD00930.1; AF001996; AAD00931.1; AF001997; AAD00931.1; AF001999; AAD00931.1; AF001999; AAD00931.1; AF002000; AAD00935.1; AF002001; AAD00935.1; AAD009
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Boeck A.;
AAD00922 1
AAD00924 1
AAD00925 1
AAD00926 1
AAD00927 1
AAD00927 1
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AAD00930 1
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Matches 21
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MPA1_CHAOB
Q96385;
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CARBOHYD
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InterPro; IPR000432; mutS_C.
InterPro; IPR002863; mutS_N.
Pfam; PF00488; mutS_C; 1.
Pfam; PF01624; mutS_N; 1.
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ECO2DBASE; E093.0; 6TH EDIT
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                                                                                                                                  use by non-profit institutions as long modified and this statement is not removed. entitles requires a license agreement (See or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Viridiplantae; Streptophyta; Emb
Spermatophyta; Coniferopsida; Coniferales;
                                                                                                                                                                                                                                                                                                                                                                                                                  Chamaecyparis obtusa (Japanese cypress).
                                                                                 EMBL; D45404; BAA08246.1; -.
Mendel; 7626; Chaob;1088;7626.
InterPro; IPR002022; Amb_allergen.
                                                                                                                                                                                                                                                                     major allergen
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MEDLINE=96265194;
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20-AUG-2001
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                                                Allergen;
                                                           PRINTS; PR00807; AMBALLERGEN
                                                                         Pfam;
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                                                                                                                                                                                                                      rification, characterization and molecular cloning of Cha o 1, a or allergen of Chamaecyparis obtusa (Japanese cypress) pollen."; Immunol. 3:451-460(1996).
SIMILARITY: BELONGS TO THE POLYSACCHARIDE LYASE FAMILY 1.
AMB A 1/AMB A 11/CRY J I SUBFAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AF002006; AAD00940.1;
AF002007; AAD00941.1;
AF002008; AAD00941.1;
AF002009; AAD00943.1;
AF002010; AAD00944.1;
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                                                Glycoprotein;
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                                                                    pec_lyase; 1.
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MAJOR POLLEN ALLERGEN CHA O N-LINKED (GLCNAC. . .) (POTE N-LINKED (GLCNAC. . .) (POTE
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es; Cupressaceae;
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CRC64;

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Query Match Best Local S Matches 17

1 Similarity 17; Conser

Conservative

18; Score Pred.

red. No. 7.3; Mismatches

DB 1; 23;

Length Indels

375;

Gaps

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12.48; 27.08;

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CC AUBB-, IN WHICH XAA IS PREFERABLY LEU, BUT MAY BE OTHER AMINO ACIDS COMMUNICATION TO THE COMMUNICATION COMMUNICATION
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P30184;
01-APR-1993
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Lin X., Kaul S., Rounsley S.D., Shea T.P., Benito M.-I., Town C.D.,
Fujii C.Y., Mason T.M., Bowman C.L., Barnstead M.E., Feldblyum T.V.,
Buell C.R., Ketchum K.A., Leb J.J., Ronning C.M., Koo H.L.,
Moffat K.S., Cronin L.A., Shen M., Vanaken S.E., Umayam L.,
Moffat K.S., Gill J.E., Adams M.D., Carrera A.J., Creasy T.H.,
Goodman H.M., Somerville C.R., Copenhaver G.P., Preuss D.,
Nierman W.C., White O., Sisch J.A., Salzberg S.L., Fraser C.M.,
Venter J.C.,
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01-APR-1993 (Rel. 25, Last sequence update)
20-AUG-2001 (Rel. 40, Last annotation update)
20-AUG-2001 (Rel. 40, Last annotation update)
CYTOSOL AMINOPEPTIDASE (EC 3].4.11.1) (LEUCINE AMINOPEPTIDASE) (PROLINE AMINOPEPTIDASE)
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MEDLINE-92209533; PubMed=1555602;
Bartling D., Weiler E.W.;
"Leucine aminopeptidase from Arabidopsis thaliana. Molecular evidence for a phylogenetically conserved enzyme of protein turnover in higher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "Sequence and analysis of chromosome 2 of
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SWISS-PROT entry is copyright. It is produced through a collaboration sen the Swiss Institute of Bioinformatics and the EMBL outstation -
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PIR; S22399; S22399.
HSSP; P00727; 1BPM.
MEROPS; M17.002; -.
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                                                                                                                                                InterPro; IPR000819; Peptidase_M17
pfam; PF00883; Peptidase_M17; 1.
PRINTS; PR00481; LANNOPPTDASE
PROSITE; PS00631; CYTOSOL_AP; 1.
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                                   ZINC (2) (BY SIMILARITY).
ZINC (1) AND 2) (BY SIMILARITY).
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ZINC (1) (BY SIMILARITY).
ZINC (1) AND 2) (BY SIMILARITY).
POTENTIAL.
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D3FA9CCCD312AA92 CRC64;
Length 520
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Query Match Best Local S Matches 26 65 79 SGL-LAQVSSEEDFTGKPGQSTV--LRLPGLG DGLVMTTISSSKDCMGEAVQNTVEDLKLNTLG Similarity 28.26; Conservative 12.3%; 15; Score 68; DB Pred. No. 12; 15; Mismatches 93 DB . 12; 21; 30; Gaps 64 78

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BARI\_YEAST STANDARD; PRT; 587 AA P12630; 01-CCT-1989 (Rel. 12, Created) 01-CCT-1989 (Rel. 12, Last sequence update) 20-AUG-2001 (Rel. 40, Last annotation updat BARRIERPEPSIN PRECURSOR (EC 3.4.23.35) (EXTROVELIN) (BAR PROTEINASE).
BARI OR SST1 OR YIL015W. update)
) (EXTRACELLULAR "BARRIER"

Saccharomyces cerevisiae (Baker's yeast). Eukaryota; Fungi; Ascomycota; Saccharomycotina;

NCBI\_TaxID=4932;

Saccharomycetales; Saccharomycetaceae;

Saccharomycetes;

SEQUENCE FROM N.A. MEDLINE-88124818;

Manney T.R., Holly

MEDIINE-88124818: PubMed\*3124102; MacKay V.L., Welch S.K., Insley M.Y., Manney T.I Saari G.C., Parker M.L.; "The Saccharomyces cerevisiae BAR1 gene encodes an exported protein

homology Natl. gy to pepsin."; Acad. Sci. U.S.A. 85:55-59(1988).

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STRAIN-S288C / AB972;

Barrell B G., Badcock K., Bankier A.T., Bowman S., Brown D.,

Churcher C.M., Connor R., Copsey T., Dear S., Devlin K., Fraser A.,

Gentles S., Hamlyn N., Horsnell T.S., Hunt S., Jagels K., Jones M.,

Louis E., Lye G., Moule S., Moule T., Odell C., Pearson D.,

Rajandream M.A., Riles L., Rowley N., Skelton J., Smith V.,

Walsh S.V., Whitehead S.;

Submitted (DEC-1994) to the EMBL/GenBank/DDBJ databases.

-i- FUNCTION: THIS PROTEIN CALLED "BARRIER ACTIVITY" IS EXCRETED BY

YEAST CELLS MATING TYPE A. IT IS PROBABLY A PROTEASE THAT CLEAVES

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PROSITE; PS00141; ASP_PROTEASE;
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InterPro; IPR001969; Asp_protease.
InterPro; IPR001461; Pepsin.
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MISCELLANEOUS: IT IS FOUND ONLY IN A MATING SIMILARITY: BELONGS TO PEPTIDASE FAMILY A1; EUKARYOTIC ASPARTYL PROTEASES FAMILY.

SIMILARITY: TO OTHER BUKARYOTIC ASPARTYL PROTECTION.
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Best Local Similarity 27.3
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01-NOV-1995 (Rel. 32, Created)
01-NOV-1995 (Rel. 32, Last sequence update)
20-AUG-2001 (Rel. 40, Last annotation update)
DNA-DIRECTED RNA POLYMERASE BETA CHAIN (EC 2.7.7.6)
BETA CHAIN) (RNA POLYMERASE BETA SUBUNIT)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Kerlavage A.R., Bult C.J., Tomb J.-F., Dougherty B.A., Merrick J. McKenney K., Sutton G., Fitzhugh W., Fields C.A., Gocayne J.D., Soott J.D., Shirley R., Liu L.-I., Glodek A., Kelley J.M., Weldman J.F., Phillips C.A., Spriggs T., Hedblom E., Cotton M.D., Utterback T.R., Hanna M.C., Nguyen D.T., Suddek D.M., Brandon R.C. Fine L.D., Fritchman J.L., Fuhrmann J.L., Geoghagen N.S.M., Gnehm C.L., McDonald L.A., Small K.V., Fraser C.M., Smith H.O., Policy C.S., Smith H.O., Fincher J.C.;
                                                                                                                                                                                                                                                                                                                                                                                                          entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                             use by non-profit institutions as long a modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE=95350630; PubMed=7542800
Fleischmann R.D., Adams M.D., Wh
                                                                                                                                                                                                                                                                        SEQUENCE
                                                                                                                                                                                                                                                                                    Complete proteome
                                                                                                                                                                                                                                                                                                 PROSITE; PS01166; RNA_POL_BETA; 1.
Transferase; Transcription; DNA-directed RNA polymerase;
                                                                                                                                                                                                                                                                                                                                                                 EMBL; U32733; AAC22173.1; -. TIGR; HI0515; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -!- FUNCTION: DNA-DEPENDENT RNA POLYMERASE CATALYZES THE TRANSCRIPTION OF DNA INTO RNA USING THE FOUR RIBONUCLEOSIDE TRIPHOSPHATES AS
                                                                                                                                                                                                                                                                                                                   Pfam; PF00562; RNA_pol_B; 1.
PROSITE; PS01166; RNA_POL_BETA;
                                                                                                                                                                                                                                                                                                                                  Pfam; PF00562;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Science
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   influenzae Rd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "Whole-genome random sequencing and assembly of Haemophilus influenzae Rd.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRAIN-RD /
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Haemophilus
                                                                                                                                                                                                                                                                                                                                                  InterPro;
317
                               104 LKLNTLGR 111
                                                              257
                                                                                                                           206
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                                                                                                                                                        11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SUBUNIT: THE ENZYME CONSISTS OF THE SIGMA CHAIN AND THE CORE ENZYME WHICH IS COMPOSED OF 2 ALPHA CHAINS, 1 BETA CHAIN, AN BETA' CHAIN.

SIMILARITY: BELONGS TO THE RNA POLYMERASE BETA CHAIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SUBSTRATES.

CATALYTIC ACTIVITY: N NUCLEOSIDE TRIPHOSPHATE - N PYROPHOSPHATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RNA(N)
                                                                                                                         ATIILRALGYTTEEILNLFFDKITFEIA-GDKLLMTL-
                                                                                                                                                        ALLVTQALGVKMAETCPIFYD-VFFAVANGNELLLDLSLTKVNATEPER----TAMKKIQ
ISLETLAK 324
                                                              ANGKVYVERGRRITARHIKALEKDNISQVVVPSEYILGKVASKDYVDLESGEIICPANGE
                                                                                          ---DCYVENG--LISRVLDGLVMTTIS------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     269:496-512(1995).
                                                                                                                                                                                                                                                                                                                                               IPR001572; RNA_pol_B.
                                                                                                                                                                                                                                                                     1343 AA;
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27.3%;
                                                                                                                                                                                                                                                                     149783 MW;
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                                                                                                                                                                                         20;
                                                                                                                                                                                    Score 67; DB Pred. No. 45; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       subdivision;
                                                                                                                                                                                                                                                                     4EF99CD648686A44 CRC64;
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                                                                                  -SSKDCM----GEAVQNTVED
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RESULT

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Matches 25
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SIGNAL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pfam; PF00141; peroxidase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "Structure of the horseradish peroxidase isozyme C genes.";
Eur. J. Blochem. 173:681-687(1988).
-i- FUNCTION: REMOVAL OF H(2)O(2). OXIDATION OF TOXIC REDUCTANTS,
-i- BIOSYNTHESIS AND DEGRADATION OF LIGNIN. DEFENSE RESPONSE TOWARD
WOUNDING AND METABOLISM OF AUXIN. THESE FUNCTIONS MIGHT BE
DEPENDENT ON EACH ISOZYME/ISOFORM IN EACH PLANY TISSUE.
-i- CATALYTIC ACTIVITY: DONOR + H(2)O(2) = OXIDIZED DONOR + 2 H(2)O.
-i- SIMILARITY: BELONGS TO THE PEROXIDASE FAMILY. PLANT PEROXIDASE
SUBFAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.

MEDLINE-88225087; PubMed-337,1352;

Fujiyama K., Takemura H., Shibaya

Shinmyo A., Takano M., Yamada Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Armoracia rusticana (Horseradish) (Armoracia laphatifolia).
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae;
eurosids II; Brassicales; Brassicaceae; Armoracia.
NCBI_TaxID-3704;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PERB_ARMRU STANDARD; PRT; 351 AA P15232; 01-APR-1990 (Rel. 14, Created) 01-APR-1990 (Rel. 14, Last sequence update) 20-AUG-2001 (Rel. 40, Last annotation update) PEROXIDASE CIB PRECURSOR (EC 1.11.1.7).
                                                                                                                                                                                                                                                                                                                                                                                                                                     PRINTS; PR00451; PEROXIDASE PRINTS; PR00461; PEROXIDASE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL; M37157; AAA33378.1;
PIR; S00626; S00626.
HSSP; P00433; ZATJ.
                                                                                                                                                                                                                                                                                                                                  MOD_RES
                                                                                                                                                                                                                                                                                                                                                                                                         PROSITE; PS00435; PEROXIDASE_1; 1. PROSITE; PS00436; PEROXIDASE_2; 1.
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 LLVLALLVTQALGVKMAETCPIFYDVFFAVANGNELLLDLSLTKVNATEPERTA----MKK 63
                             l Similarity
25; Conser
                                                                                                     66
70
198
39
39
72
125
205
41
85
214
214
226
242
242
283
351 AA;
                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                             Glycoprotein;
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70
198
119
329
329
237
41
85
214
226
242
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29
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26.9%;
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PYRROLIDONE CARBOXYLIC AC
SIMILARITY).
BY SIMILARITY
DISTAL HISTIDINE (BY SIM:
PROXIMAL HISTIDINE (HEME
PROXIMAL HISTIDINE (HEME
BY SIMILARITY.

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10. (1.1)

N-LINKED (GLCNAC. . . ) (1.1)
                         Score 65.5; DI
Pred. No. 14;
LB; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                          Peroxidase; Heme; Multigene family;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Okada
                                           No. 14;
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(HEME AXIAL LIGAND).
                                                                                                       CRC64;
                                                        Length 351;
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Cole S.T., Brosch R., Parkhill J., Garnier T., Churcher C., Harris Gordon S.V., Eiglaneier K., Gas S., Barry C.E. III, Tekaia F., Bardoock K., Basham D., Brown D., Chillingworth T., Connor R., Davies R., Devlin K., Feltwell T., Gentles S., Hamlin N., Holroyd Hornsby T., Jagels K., Krogh A., McLean J., Moule S., Murphy L., Oliver S., Osborne J., Quail M.A., Rajandream M.A., Rogers J., Rutter S., Seeger K., Skelton S., Squares S., Squares R., Sulston J.E., Taylor K., Whitehead S., Barrell B.G.;

"Deciphering the biology of Mycobacterium tuberculosis from the complete genome sequence.";
Nature 393:537-544(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HEM1_MYCTU
Q11139;
01-OCT-1996
01-OCT-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                  STRAIN-CDC 1551 / Oshkosh; Fleischmann R.D., Aland D., Eisen J.A., Carpenter L., White O., Fleischmann R.D., Deby R., Dodson R., Gwinn M.L., Haft D., Hickey E., Peterson J., DeBoy R., Dodson R., Gwinn M.L., Haft D., Salzberg S.L., Kolonay J.F., Nelson W.C., Umayam L.A., Ermolaeva M.D., Salzberg S.L., Delcher A., Utterback T., Weidman J., Khouri H., Gill J., Mikula A., Bishai W.;
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                                                                                                                                 EMBL;
                                                                                                                                                                  entities requires a license agreement (See http://www.isb-slb.ch/announce/or send an email to license@isb-slb.ch).
                                                                                                                                                                                                                                                                                                     01-OCT-1996 (Rel. 34, Created)
01-OCT-1996 (Rel. 34, Last sequence update)
01-OCT-1996 (Rel. 40, Last annotation update)
20-AUG-2001 (Rel. 40, Last annotation update)
GLUTAMYL-TRNA REDUCTASE (EC 1.2.1.-) (GLUTR).
HEMA OR RV0509 OR MT0530 OR MTCY20G9.36.
                              InterPro; IPR000343; GlutR.
InterPro; IPR000594; ThIP_family.
Pfam; PP00745; GlutR; 1.
PROSITE; PS00747; GLUTR; 1.
                                                                                                                                                                                                                This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A. STRAIN=H37RV;
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Bacteria; Firmicutes; Actir
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bacteria; Firmicutes; Actinobacteria; Actinobacteridae;
Actinomycetales; Corynebacterineae; Mycobacteriaceae; Mycobacterium.
                                                                                                   FubercuList;
                                                                                                                    FIGR;
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                                                                                                                                 Z77162; CAB00935.1; -. AE006953; AAK44753.1; ALT_INIT
 biosynthesis; Oxidoreductase; NADP; Complete proteome 468 AA; 49361 MW; DDC257648FF6EAAB CRC64;
                                                                                                     Rv0509;
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ACRULTURE ACRUMENT AC
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Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TISUE-Brain;
MEDLINE-97323006; PubMed-9179496;
Chara O. Nagase T., Ishikawa K.-I., Nakajima D.,
                                                                                                                                                                                                              MIM;
                                                                                                                                                                                                                                                        EMBL; AB006627; BAA22958.1; -. EMBL; AL022145; CAA18140.1; -.
                                                                                                                                                                                                                                                                                                                            entities requires a license agreement (S or send an email to license@isb~sib.ch).
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Submitted (MAY-1998)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Seki N., Nomura N.; "Construction and characterization of human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ASTN1 OK ALL. Homo sapiens (Human).
Homo sapiens (Human).
Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ASTROTACTIN 1 (FRAGMENT).
ASTN1 OR ASTN OR KIAA0289.
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20-AUG-2001 (Rel. 40, Last sequence update)
20-AUG-2001 (Rel. 40, Last annotation updat
ASTROTACTIN 1 (FRAGMENT).
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014525; 060799;
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                                                                                                                                                                InterPro;
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                                                                                                                                        InterPro;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CEREBELLUM AND OLFACTORY BULB.
ALTERNATIVE PRODUCTS: 2 ISOFORMS; 1 AND 2 (SHOWN HERE); PRODUCED BY ALTERNATIVE SPLICING.
SIMILARITY: CONTAINS 3 EGF-LIKE DOMAINS.
SIMILARITY: CONTAINS 2 FIBRONECTIN TYPE III-LIKE DOMAINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   nitted (MAY-1998) to the EMBL/GenBank/DDBJ databases. FUNCTION: NEURONAL ANHESION MOLECULE THAT IS REQUIRED FOR GLIAL-GUIDED MIGRATION OF YOUNG POSTMITOTIC NEUROBLASTS IN CORTICAL REGIONS OF DEVELOPING BRAIN, INCLUDING CEREBRUM, HIPPOCAMPUS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LGMAERKLG
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                                                                                                                                                                                                                                  AL022145; CAA18141.1;
                        SM00060;
SM00457;
                                                                                          SM00181;
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30; Conservative
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                                                                                                                                     IPR000561;
IPR001777;
IPR001862;
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FN3; 1.
EGF_1;
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CARBOHYD
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DOMAIN
SEQUENCE FROM N.A.

STRAIN-RD / KW20 / ATCC 51907;

MEDILINE-95550630; PubMed-7542800;

Fleischmann R.D., Adams M.D., White O., Clayton R.A., Kirkness E Kerlavage A.R., Bult C.J., Tomb J.-F., Doughberty B.A., Merrick J McKenney K., Sutton G., Fitzhugh W., Fields C.A., Gocayne J.D., Scott J.D., Shirley R., Liu L.-I., Glodek A., Kelley J.M., Weidman J.F., Phillips C.A., Spriggs T., Hedblom E., Cotton M.D. Utterback T.R., Hanna M.C., Nguyen D.T., Saudek D.M., Brandon R. Fine L.D., Fritchman J.L., Fuhrmann J.L., Geoghagen N.S.M.,
                                                                                                                                                                                                                                    01-NOY-1995 (Rel. 32, Created)
01-NOY-1995 (Rel. 32, Last sequence upo
20-AUG-2001 (Rel. 40, Last annotation und(+)/H(+) ANTIPORTER 2 (SODIUM/PROTON)
                                                                                                                                                                                                                                                                                                                                  HAEIN
                                                                                                                                                                              Bacteria; Pı
Haemophilus
                                                                                                                                                                                                                         NA(+)/H(+) ANTIPORTER NHAB OR HI0427.
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Search completed: May 7, 2002, 12:17:05
Job time: 197 sec
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPLETE PROTEOME.
TRANSMEM 29
TRANSMEM 91
TRANSMEM 151
TRANSMEM 217
TRANSMEM 247
TRANSMEM 247
TRANSMEM 312
TRANSMEM 33
TRANSMEM 337
TRANSMEM 357
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or profit to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL; U32726; AAC22086.1; -. TIGR; HI0427; -. Transmembrane; Inner membrar
                                                                                                                                                                                                                                                          154 ALTVVAVIISVAMG------FYGVYHKVASGNNLIDAVDISDDR-KIIEQQHEILEK 203
                                                                                                                                          204 FRAF-----LRSLMMHAGVGTALGGVMTVVGEP-QNLIIAEQAKWN 243
                                                                                                                                                                                                    64 IQDCYVENGLISRVLDGLVMTTISSSKDCMGEAVQNTV--EDLKLN 107
                                                                                                                                                                                                                                                                                                                        6 ALLVLALLVTQALGVKMAETCPIFYDVFFAVANGNELL--LDLSLTKVNATEPERTAMKK 63
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Listing first 45 summaries
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                                  Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                            SPTREMBL_17:*

1: sp_archea:*
2: sp_bacteria:*
3: sp_fungi:*
4: sp_human:*
5: sp_invertebrate
6: sp_mammal:*
7: sp_mhc:*
8: sp_organelle:*
9: sp_phage:*
10: sp_plant:*
11: sp_vortebrate:
13: sp_vertebrate:
14: sp_unclassifie
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  473505 seqs, 146272329 residues
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Gapop 10.0 , Gapext 0.5
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552
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                                                                                                            sp_rodent:*
sp_virus:*
sp_vertebrate:*
sp_unclassified:*
                                                                                                                                                                                                           sp_organelle:*
sp_phage:*
                                                                                                                                                                                                                                                                      sp_invertebrate:*
sp_mammal:*
SUMMARIES
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19	18	17	16	15	14	13	12	11	10	9	00	7	6	. UT	4	w	N	_	Result No.
68.5	68.5	68.5	68.5	68.5	69	69	69	70	70.5	70.5	71	71	72	72	75	76.5	78	154	Score
12.4	12.4	12.4	12.4	12.4	12.5	12.5	12.5	12.7	12.8	12.8	12.9	12.9	13.0	13.0	13.6	13.9	14.1	27.9	Query Match
1167	534	466	343	343	895	857	770	245	388	295	1252	119	800	404	945	2771	1247	112	Query Match Length
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049471	Q9CAB0	057878	Q28283	Q92519	Q9YAU1	P74911	Q9HI70	Q9PBX0	048678	Q9X242	Q55959	Q9ES84	Q9СНМ8	Q9A0D8	Q9M7A8	Q26216	OMAL60	Q9JI02	ID
049471 arabidopsis	Q9cab0 arabidopsis	057878 pyrococcus	Q28283 canis famil	Q92519 homo sapien	Q9yaul aeropyrum p			Q9pbx0 xy1ella fas	048678 arabidopsis	Q9x242 thermotoga	Q55959 synechocyst	Q9es84 mus musculu	Q9chm8 lactococcus	Q9a0d8 streptococc	Q9m7a8 nicotiana t	. Q26216 plasmodium •	Q9tyw0 caenorhabdi	Q9j102 mus musculu	Description

45	44	43	42	41	40	39	38	37	36	35	34	33	32	31							24	23	22	21	20
64.5	65	65	65	65	65	65	65	65	65	65	65.5	65.5	65.5	65.5	66	66	66	66.5	66.5	67	67	67.5	67.5	67.5	68
11.7	11.8	11.8		11.8							11.9										12.1				12.3
157	574	571	530	483	400	392	392	343	326	270	5825	352	320	313	1063	636	468	488	378	675	530	626	346	290	133
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062841	Q9AA11	097446	Q9KQU7	Q9VXS8	Q9W115	Q9JVR6	Q9K0N8	Q9SNV1	Q9C8U7	Q9A0H2	082731	022443	Q9ZWP2	Q9EWU7	Q9J844	090142	000220	Q9VM95	Q9USZ2	Q9FNM5	Q9DWD8	Q9NDD1	Q9LDA4	Q9P827	Q9TLU5
062841 equus cabal	Q9aall caulobacter	-	Q9kqu7 vibrio chol				Q9k0n8 neisseria m	Q9snvl antirrhinum		Q9a0h2 streptococc	082731 vicia faba	O22443 glycine max	Q9zwp2 lycopersico	Q9ewu7 streptomyce	Q9j844 spodoptera		000220 homo sapien		Q9usz2 schizosacch	Q9fnm5 arabidopsis	Q9dwd8 rat cytomeg	Q9ndd1 leishmania		Q9p827 candida alb	Q9tlu5 cyanidium c

## ALIGNMENTS

RESULT Q9TYW0 ID Q AC Q DT 0	Db Db	Quer: Best Matc	RRP
IIT 2 W0 Q9TYW0 PRELIMINARY; PRT; 1247 AA. Q9TYW0; Q1-MAY-2000 (TrEMBLrel. 13, Created) O1-MAY-2000 (TrEMBLrel. 13, Last sequence update)	3 MRGALLVLALLVTQALGVKMAETCPIFYDVFFAVANGNELLLDLSLTKVNATEPERTAMK 62   :    :                 :   : : : : :	Query Match 27.9%; Score 154; DB 11; Length 112; Best Local Similarity 35.2%; Pred. No. 1.4e-08; Matches 32; Conservative 23; Mismatches 36; Indels 0; Gaps	OUTOUR PRELIMINARY; PRT; 112 AA.  Q9JI02 Q9JI02 Q9JI02 Q9JI02 O1-CCT-2000 (TrEMBLrel. 15, Careated) O1-CCT-2000 (TrEMBLrel. 15, Last sequence update) O1-CCT-2000 (TrEMBLrel. 15, Last annotation update) O1-CCT-2000 (TrEMBLrel. 15, Last sequence update) O1-CCT-2000 (TrEMBLrel. 12, Last sequence update) O1-CCT-2000 (TrEMBLrel. 15, Last sequence update) O1-CCT-2000 (TrEMBLrel.

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Q26216;
Q1-NOV-1996
Q1-OCT-2000
Q1-OCT-2000
                                   2102
                                                                                                                                                                                                                                                 Holder A.A.;
Submitted (APR-2000) to the
EMBL; U36927; AAB41263.3; -.
SEQUENCE 2771 AA; 325640
                                                                                                                                                                                                                                                                                                                                                                                                                                       Green J.L., Holder A.A.;
"Structure of the E8 gene encoding a protein of Plasmodium yoelii,";
Mol. Biochem. Parasitol. 0:0-0(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sinha K.A., Keen J.K., Ogun S.A., Holder A.A.; "Comparison of two members of a multigene family coding molecular mass rhoptry proteins of plasmodium yoelii.", Mol. Biochem. Parasitol. 76:329-332(1996).
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Eukaryota; Alveolata;
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Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditidae; Peloderinae; Caenorhabditis.
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                                                       34 FAVANGNELLLDLSLTKV-NATEPERTAMKKIQDCYVE-NGLISRVLDGLVMTTISSSKD 91
                                                                                                                                                                                                                                                                                                                                                                                           EQUENCE FROM N.A.
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                             FSEENNNILQSKKKLKELTNAFNAE---IKKIEDKIIEKNGLINKL-----IETRKD 2150
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Pred. No. 72;
2; Mismatches
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Mismatches
                                                                                                                                                                                                                                                            COCCB9AB6E7ACF36 CRC64;
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                                                                         01-JUN-2001 (TrEMBLrel. 17, Created)
01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
DUTATIVE THIAMINE BIOSYNTHESIS PROTEIN.
THII OR SPY0817.
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  Streptococcus
                       Streptococcus pyogenes. Bacteria; Firmicutes; F
                                                                                                                                                                                                          Q9A0D8;
                                                                                                                                                                                                                                  Q9A0D8
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PRELIMINARY;

404

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258

Bacillus/Clostridium

group;

Streptococcaceae;

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Query Match
Best Local
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O9M7A8;

O9M7A8;

O1-OCT-2000 (TrEMBLrel. 15, Created)

O1-OCT-2000 (TrEMBLrel. 15, Last sequence update)

O1-OUN-2001 (TrEMBLrel. 17, Last annotation update)

IRR RECEPTOR-LIKE PROTEIN KINASE.

Nicotiana tabacum (Common tobacco).

Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;

Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;

Spermatophyta; Magnoliophyta; Solanales; Solanaceae; Nicotiana.
                                                                                                                                                                                                                                                        Pfam; PRO0560; LRR; 6.
Pfam; PRO0059; PKINASS; 1
PRINTS; PRO0019; LEURICHRPT.
PRINTS; PR00109; TYRKINASE.
SMART; SM00370; LRR; 7;
SMART; SM00370; LRR; 7; 1.
SMART; SM00321; STYKC; 1.
                                                                                                                                                                                             PROSITE: PS00107; PROTEIN_KINASE_ATP; UNKNOWN_1.
PROSITE: PS50011; PROTEIN_KINASE_DOM; 1.
PROSITE; PS00108; PROTEIN_KINASE_ST; 1.
ATP-binding; Kinase; Receptor; Serine/threonine-
                                Transferase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
77 VLDGLV-----MTTISSSKDCMGEAVQNTVED 103
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                                                                                              24;
                                                                                                           Similarity
                                                                                                                                                                    945 AA;
                                                                                           Conservative
                                                                                                                                                                     101787 MW;
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                                                                                             18;
                                                                                                         Score 75;
Pred. No.
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28;
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                                                                                             Indels
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Q9СНМ8
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                                                                                                                      Pyridoxal
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-JUN-2001 (TrEMBLrel. 17, Created)
01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
GLYCOGEN PHOSPHORYLASE (EC 2.4.1.1) (ALPHA-GLUCAN P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ferretti J.J., McShan W.M., Ajdic D.J., Savic D.J., Savic G., Primeaux C., Sezate S., Suvorov A.N., Kenton S., Lai H.S., Lii Qian Y., Jia H.G., Najar F.Z., Ren Q., Zhu H., Song L., White Yuan X., Clifton S.W., Roe B.A., McLaughlin R.; "Complete genome sequence of an M1 strain of Streptococcus pyr Proc. Natl. Acad. Sci. U.S.A. 98:4658-4663(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q9СНМ8;
                                                                                                                                PROSITE; PS00102; PHOSPHORYLASE; 1. Carbohydrate metabolism; Complete proteome; Pyridoxal phosphate; Transferase.
                                                                                                                                                                                                                                                                                                                                                                               Bolotin A., Wincker P., Weissenbach J., Ehrlich
                                                                                                                                                                                                                                                                                                                                                                                                            STRAIN-IL1403;
                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bacteria; Firmicutes;
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                                                                                                                                                                                          [nterPro;
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                                                                                                                                                                         CATALYTIC ACTIVITY: (1,4-ALPHA-D-GLUCOSYL)(N) + O (1,4-ALPHA-D-GLUCOSE 1) N-1) + ALPHA-D-GLUCOSE 1-P COPACTOR: PYRIDOXAL PHOSPHATE (BY SIMILARITY).

SIMILARITY: TO THE GLYCOGEN PHOSPHORYLASE FAMILY.

L; AE006303; AAK04798.1; -

GEPPO: IPRO00811; Phosphorylase.

m; PF00343; phosphorylase; 1.
                                                                                                                                                                                                                                                                    FUNCTION: PHOSPHORYLASE IS AN IMPORTANT ALLOSTERIC ENZYME IN CARBOHYDRATE METABOLISM, ENZYMES FROM DIFFERENT SOURCES DIFF THEIR REGULATORY MECHANISMS AND IN THEIR NATURAL SUBSTRATES, HOWEVER, ALL KNOWN PHOSPHORYLASES SHARE CATALYTIC AND STRUCT PROPERTIES (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              σ
                                                                                                                                                                                                                                                                                                                                                                    complete genome
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                         DVFFAVANGNELLLDLSLTKVNATEPERTAMKKIQDCYVENGLISRVLDGLVMTTISSSK 90
EIFEAAGDGNNFV--FGLTKDEVYEYYRNGNYNARDIYEQNPVVNRILNALIDGTVPNIK
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                                                    Similarity 28. 17; Conservative
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es; Bacillus/Clostridium group;
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Pred. No. 48;
.4; Mismatches
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Pred.
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Q9ES84;
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01-MAR-2001 (TrEMBLI
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01-NOV-1996 (TrEMBLrel.
01-NOV-1996 (TrEMBLrel.
01-JUN-2001 (TrEMBLrel.
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Synechocystis sp. s
                                                                                                                                      Kaneko T., Sato S., Kotani H., Tanaka A., Asamizu E., Miyajima N., Hirosawa M., Sugiura M., Sasamoto S., Kimiyajima N., Matsuno A., Muraki A., Nakazaki N., Naru
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SLR0697
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                                                                                        Shimpo S., Takeuchi
Tabata S.;
                                                                                                                                                                                                                                    SEQUENCE FROM N.A. MEDLINE=97061201; PubMed=8905231;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bacteria; Cyanobacteria;
NCBI_TaxID=1148;
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Bacteria; Cyanoba
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Mammalia; Eutheria;
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                              s of the genome of t
strain PCC6803. II.
assignment
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Meeker N.D., Teuscher C.;
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01, Last sequence up
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Chroococcales;
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Sciurognathi; Muridae;
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mada M.,
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, Kimura T.,
, Kimura f
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                                                                                                                   Yasuda
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RESULT
048678
ID 04
AC 04
DT 01
DT 01
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Qy
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Best Local Similarity 30.4
Matches 24; Conservative
 048678;
048678;
01-JUN-1998
01-JUN-1998
                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.

STRAIN-MSB8 / DSM 3109;

MEDIJINE-9287316; pubmed-10360571;

MEDIJINE-9287316; pubmed-10360571;

Melson K.E., Clayton R.A., Gill S.R., Gwinn M.L., Dodson R.J.,

Melson K.E., Clayton R.A., Gill S.R., Linher K.D., Ketchum K.A.,

Haft D.H., Hickey E.K., Peterson J.D., Nelson W.C., Ketchum K.A.,

McDonald L., Utterback T.R., Malek J.A., Linher K.D., Garrett M.M.,

Stewart A.M., Cotton M.D., Pratt M.S., Philips C.A., Richardson D.,

Heidelberg J., Sutton G.G., Fleischmann R.D., Eisen J.A., White O.,

Palaberg S.L., Smith H.O., Venter J.C., Fraser C.M.,

"Byidence for lateral gene transfer between Archaea and Bacteria from

genome sequence of Thermotoga maritima.";

Nature 399:323-329(1999).

Nature 399:323-329(1999).

Nature 399:323-329(1999).

Nature Benome Sequence of Thermotoga maritima.";
                                                                                                                                                                                                                                                                                                       Complete proteome.
SEQUENCE 295 AA; 33641 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Thermotoga maritima.

Bacteria: Thermotogales; Thermotoga.

NCBI_TaxID=2336;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q9X242 PRELIMINARY; PRT; 295 AA.
Q9X242; Q9X242;
01-NOV-1999 (TrEMBLrel. 12, Created)
01-NOV-1999 (TrEMBLrel. 12, Last sequence update)
01-JUN-2000 (TrEMBLrel. 14, Last annotation update)
CONSERVED HYPOTHETICAL PROTEIN.
TM1717.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DNA Res. 3:109-136(1996).

EMBL; D64005; BAA10729.1; -.
InterPro; IPR002812; Hydantoinase_A.
InterPro; IPR002812; Hydantoinase_B.

Pfam; PF01968; Hydantoinase_B; 1.

Pfam; PF02538; Hydantoinase_B; 1.

Hypothetical protein; Complete proteome.

BYDOTHORION BYDOTECTA; 136051 MW; 07ECCA495CD3E25F CRC64;
                                                                                                                    133 --LEEIYSGLYPIVKTSAKTGMG
                                                                        10
                                                                                                                                    84 LVVT----VKMPETSTYIIDKFLVLAEKNELETVMVINKMDLYDED--DLRKVRE----
                                                                                                                                                                                           Local :
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                                                                                                                                                                                                                                    Similarity 26.0
25; Conservative
(TrEMBLrel. 06, (TrEMBLrel. 06,
                                              PRELIMINARY,
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 Created)
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Pred. No. 21;
19; Mismatches
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Pred. No. 1e+02;
3; Mismatches
                                            PRT;
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sequence update)
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RE SEQUENCE FROM N.A.

RESEQUENCE 
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RC STRAIN=CV. COLUMBIA;

RA Federspiel N.A., Palm C.J., Conway A.B., Kurtz D.B., Conway A.R.,

RA Au M., Araujo R., Buehler E., Dewar K., Feng J., Kim C., Li Y.,

RA Au M., Araujo R., Buehler E., Dewar K., Feng J., Kim C., Li Y.,

RA Yu G., Csborne B.I., Shinn P., Sun H., Toriumi M., Vysotskaia V.S.,

RA Yu G., Ecker J., Theologis A., Davis R.W.;

Submitted (FEB-1998) to the EMBL/GenBank/DDBJ databases.

BEMBL, AC002396; AAC00573.1; -

BEMBL, AC002396; AAC00573.1; -

BR HSSP, P25685; 1HDJ.

BR InterPro; IPRO01623; DnaJ.

BR Ffam; FP60216; DnaJ; 1.

BR PROSITE; PS00636; DnaJ; 1.

BR SMART; SM00771; DnaJ; 1.

BR PROSITE; PS00676; DNAJ_1; UNKNOWN_1.

BR PROSITE; PS00676; DNAJ_2; 1.
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Best Local Similarity
Matches 24; Conserv
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01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
01-MAR-2001 (TrEMBLrel. 16, Last annotation update)
RIBOSE-5-PHOSPHATE ISOMERASE A.
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Arabidopsis thaliana (Mouse-ear cress).
Arabidopsis thaliana (Mouse-ear cress).
Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosic
eurosids II; Brassicales; Brassicaceae; Arabidopsis.
NCBI_TaxID=3702;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bacteria; Proteobacteria;
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llarity 29.6%;
Conservative 1
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Pred. No. 29;
L2; Mismatches
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Matches 27
                                                                                                                Query Match
Best Local Similarity
                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       de Oliveira M.C., de Oliveira R.C., Palmieri D.A., Paris A., Petatoto B.R., Pereira G.A.G., Pereira H.A. Jr., Pesquero J.B., Quaggio R.B., Roberto P.G., Rodrigues V., de Rosa A.J.M., de Rosa V.E. Jr., de Sa R.G., Santelli R.V., Sawasaki H.E., da Silva A.C.R., da Silva A.C.R., da Silva R.M., da Silva R.R., Silva W.A. Jr., da Silva A.C., Silvestri M.L.Z., Siqueira W.J., de Souza A.A., de Souza A.P., Terenzi M.F., Truffi D., Tsai S.M., Tsuhako M.H., vallada H., Van Sluys M.A., Verjovski-Almeida S., Vettore A.L., Zago M.A., Zatz M., Meldanis J., Setubal J.C.; "The genome sequence of the plant pathogen Xyiella fastidiosa."; Nature 406:151-159(2000).
                                                                                                                                                                                         Nature 407:508-513(2000).

EMBL; AL445067; CAC12593.1; -.

EMBL; PR00317; PR000788; Ribonucleo_red

Pfam; PF00317; ribonucleo_red; 3.

PRINTS; PR01183; RIBORDTASEM1.
                                                                                                                                                                                                                                                                                                                                                                                                                                    01-MAR-2001 (TrEMBLrel.
01-MAR-2001 (TrEMBLrel.
01-JUN-2001 (TrEMBLrel.
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                                                                                                                                                                   Complete proteome. SEQUENCE 770 AA;
                                                                                                                                                                                                                                                        "The genome sequence of the acidophilum.":
                                                                                                                                                                                                                                                                                                       STRAIN=DSM 1728;
MEDLINE=20479972; PubMed=11029001;
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Thermoplasma acidophilum.
Thermoplasmales;
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                                                                                                                                                                                                                                                                                             Kuepp
                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=2303;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-MAR-2001
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                                                               YDVFFAVANGN----ELLİDLSLTKVNATEPERTAMKKIQDCYVENGLISRVLDGLVMTT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              YKAMLSVKNGTMKDAEQLADKVVARLK--DKERPSVEEIQD-VVEDVLMTSKIDGKTFTD
VAKSYILYREKRRAIREEKELMG----VKDDLKL
                                                                                                                                                                                                                                                                                 A., Graml W., Sa
H.-W., Frishman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AE004020; AAF84817.1; -.
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                                                                                                    Conservative
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A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -TISSSKDCMGEAVQNTVEDLKLNTLG
                                                                                                                                                                                                                                                                                 Santos-Martinez M.-L., Koretke K.K., Volker C., an D., Stocker S., Lupas A.N., Baumeister W.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     26561 MW;
                                                                                                                                                                   86925 MW;
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27.0%;
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                         --- KDCMGEAVQNTVEDLKL 106
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16,
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Last
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Pred. No. 19;
13; Mismatches
                                                                                                  Score 69; DB Pred. No. 93; N15matches
                                                                                                                                                                                                                                                                    tocker S., Lupas A.N.,
thermoacidophilic scav
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                                                                                                                                                                   4A5E1E1945842CF4 CRC64;
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113
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RESULT

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31 DVFFAVANGNELLLDLSLTKVNATEPERTAMKKIQDCYVENGLISRVLDGLVMTTISSSK 90

Matches

Conservative

12;

Mismatches

1.1e+02; ches 21;

Indels

14;

Gaps

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P 174911
P 1
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Query Match
Best Local Similarity
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Best Local
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01-NOV-1999
01-NOV-1999
01-JUN-2001
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Proc. Natl. Acad. Sci. U.S.A. 0:0-0(
EMBL; U73619; AAB18239.1; -.

InterPro; IPR000788; Ribonucleo_red.

Pfam; PF00317; ribonucleo_red; 3.

PRINTS; PR01183; RIBORDTASEM1.
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01-FEB-1997 (TrEMBLrel.
01-FEB-1997 (TrEMBLrel.
01-JUN-2001 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                    Kawarabayasi Y., Hino Y., Horikawa H., Yamazaki S., Haik
Jin-no K., Takahashi M., Sekine M., Baba S.-I., Ankai A.
Hosoyama A., Fukui S., Nagai Y., Nishijima K., Nakazawa
Takamiya M., Masuda S., Funahashi T., Tanaka T., Kudoh Y
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RIBONUCLEOTIDE REDUCTASE. Thermoplasma acidophilum.
                                                                                              InterPro; IPR000722; RNA_pol_A.
Pfam; PF00623; RNA_pol_A; 1.
DNA-directed RNA polymerase; Complete proteome.
SEQUENCE 895 AA; 101740 MW; 1E01BC06B4BD0AAE CRC64;
                                                                                                                                                                                                                     crenarchaeon, Aeropyrum pernix Kl."; DNA Res. 6:83-101(1999).
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Nakamura Y., Nomura N., Sako Y., Kikuchi H.;
                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE=99310339; PubMed=10382966;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=56636;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Archaea; Crenarchaeata;
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                                                                                                                                                                                                                                                                 "Complete genome sequence of an aerobic hyper-thermophilic
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                                                                                                                                                                   AP000062; BAA80857.1; -
Pro; IPR000722; RNA_po1_!
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12, Last sequence update)
17, Last annotation update)
DNA-DIRECTED RNA POLYMERASE
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Pred. No.
  Score 69;
Pred. No.
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Ankai A., Kosugi
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Search completed: May 7, 2002, 12 Job time: 194 sec	Oy 24 ETCPIFYDVFFAVANGNELLLL 	Query Match 12.4%; (1985) Best Local Similarity 35.2%; (1986) Matches 19; Conservative 9	Pro; IPR000719; Euk_pki PF00069; pkinase; 2. TE; PS50011; PROTEIN_KI inding; Transferase. NCE 343 AA; 38800 MW	Strausberg R.; Submitted (FEB-2001) to the Submitted (FEB-2001); to the EMBL; B07119; BAA13250.1; EMBL; BC002637; AAH02637.1; HSCD D06371 1355	ADENOCARC	[1] SEQUENCE FROM N.A. SEQUENCE FROM N.A. TISSUE-CANCELLOUS BONE; Ohno I., Hashimoto J., Takao Submitted (AUG-1996) to the		01-FEB-1997 (TEMBLIEL 02, 01-FEB-1997 (TEMBLIEL 02, 01-JUN-2001 (TEMBLIEL 17, 01-JUN-2001 (TEMBLIEL 17, 083955 (G83955 PROTEIN).	RESULT 15 092519 PRELIMINARY; AC 092519:	Qy 91 DCMGEAVQ 98       :  Db 852 DLYGNLIQ 859	Db 806 EVFFHAAAGREGLVD
:16:47	ETCPIFYDVFFAVANGNELLLDLSLTKVNATEPERTAMKKIQDCVVENG 72   :  :  :  :  :  : : :  :  EAARLFYQIASAVAHCHDGGLVLRDLKLRKFIFKDEERTRVKLESLEDAVILRG 204	Score 68.5; DB 4; Length 343; Pred. No. 40; ; Mismatches 21; Indels 5; Gaps 2;	NASE_DOM; 1. BF8B7366DACB84FA CRC64;	EMBL/GenBank/DDBJ databases.	INOMA;	ka K., Ochi T., Okubo K., Matsubara K.; EMBL/GenBank/DDBJ databases.	Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.	created) itast sequence update) Last annotation update)	PRT; 343 AA.		:     ::  ::   ::   TAVKTSQSGYMQRRLINALQD-IVVTYDGTVR 851

Run

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 522463
Human T cell react
Felis sp. allergen
TRFP chain 2 - lon
T cell reactive fe
Feline human TRFP
                                                                                                                                                 Description
                                                                                                TRFP Chain #2 with
T cell reactive fe
Feline human TRFP
                                                           Cat TRFP chain 2 1
Human TRFP chain 2
TRFP chain 2 (with
 \ensuremath{\mathbb{T}} cell reactive feline protein; cat allergy; allergic; IgE; desensitizing.
                                                                                                                                                                                      protein
                                                                                                                                                                                                             peptide
                                                                                                                                                                                                                                                                                                                TRFP Chain #2 with C2
                                                                                                                                                                                                                                                                                                                                       20-MAY-1998
                                                                                                                                                                                                                                                                                                                                                                AAR27369;
                                                                                                                                                                                                                                                                                                                                                                                      AAR27369 standard; protein; 111
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50	26 23.4	6 2	6 2	6 2	6 2	6 2	2 28.	2 28.	2 28.	2 28.	7 33.	7 33.	7 33.	7 33.	1 45.	4 57.	4 57.	4 57.	6 59.	6 59.	9 71.	1 73.	1 73.	1 73.	1 73.	3 74.	374.	3 74.	3 74.	3 74.	3 7	2 82.
	9 2 8 6																									10		9	9	9	97	
21 AAB2897	ያ <u>ተ</u>	1 AAY901	21 AAY8768	1 AAB28	14 AAR4197	14 AAR3654	1 AAY51	1 AAY901	1 AAY876	1 AAB289	3 AAR2	1 AAY5:	1 AAY8	1 AAB2	3 AAR2	1 AAYS	1 AAYE	1 AAB	0 AAY2	8 AAW2	12 AAR12122	1 AAYS	1 AAYS	1 AAYE	1 AAB2	3 AAR2	1 AAY5	1 AAY901	1 AAY876	1 AAB289	2 AAR1	21 AAY5147
79		)9	34	ω	17	4	18	6	81	6	7	77	ŏ	9	2	6	19	8	2	2	2	2	5	ď	Ğ	ō	ב	4	4	4	ü	υ
Peptide YZX	Human TRFP	Cat TRFP	Feline hu	de	Human T c	Peptide Z	an TRE	Cat TRFP	Feline hu	Ë	TRFP Chain	Human TRFP	Feline hu	T cell re	TRFP Chain	н	Feline hu	T cell re	Human MHC	Chain 2 of	Н		Ą		Ξ		a	Ę	eline	cell	a	Human TRF
YZX. Feli	deri vzy	ived	human TRFP	erived	cell react	•	P chain	chain 2 g	human TRFP	ctive f	#2 C2S	P chain 2	human TRFP	ĕ	#2 C2S	P chain 2	human TRFP	reactive fe	ξ	f major c		chain	∸.	TRF	ctive	#2 wit	┷.	N	TRF	ctive f	2 - tr	P chain 2

## ALIGNMENTS

A

(first entry)

leader sequence

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WPI; 1992-331670/40.
                            Bond J, Kuo M;
                                                                                                                                                                                                                                                                                                   Felis domesticus
                                                        (IMMU-) IMMULOGIC PHARM CORP
                                                                                       28-FEB-1991;
                                                                                                                     20-FEB-1992;
                                                                                                                                                   17-SEP-1992.
                                                                                                                                                                             WO9215613-A
                                                                                       91US-0662193
                                                                                                                   92WO-US01344
                                                                                                                                                                                                                           /label= C2 leader
19..111
                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                           /label= TRFP chain #2
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RESULT AAB2
XX AAB2
XX AAB2
XX AAB2
XX Cat.
XX Inmut.
XX
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Best Local S
Matches 111
                                                                                                                                                                                                                                                                                                                                                                                    02-SEP-1994;
03-NOV-1989;
28-FEB-1991;
13-DEC-1991;
25-MAR-1992;
15-MAY-1992;
                                                                    Detecting, preventing and treating sensitivity to cat protein allergen comprises combining a biological sample with a human {\tt T} cell reactive feline protein and determining the extent of binding that occurs -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This sequence represents a modified human T-cell reactive feline protein which stimulates T-cells from an individual who is allergic to cats, but which interacts with human IgE to a lesser extent than does affinity purified TRRP! The protein is modified by treating with either a mild alkali (pH 12.5-13.5 , KOH, NaOH, LiOH or tertiary amines) or an enzyme which removes O-linked groups (carbohydrate modieties). It is useful in desensitising people who are allergic to cats.
                     Claim 1; Figure 3; 106pp; English
                                                                                                                                                                                WPI; 2000-601477/57.
N-PSDB; AAC60103.
                                                                                                                                                                                                                                                           Gefter ML,
                                                                                                                                                                                                                                                                                                         (IMMU-) IMMULOGIC PHARM CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     28-APR-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      19-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US6120769-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Cat; allergy; human T cell reactive feline protein; hTRFP; immunotherapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               T cell reactive feline protein chain 2 long form.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    29-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 1; Fig 1; 35pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Modified human T-cell reactive feline protein - stimulates T-cell in individuals allergic to cats and shows reduced histamine-releasing properties
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAB28933 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
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111; Conservative
                                                                                                                                                                                                                                                     Garman RD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                111 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                                                                                                                                                                                                                                                                                                                                                                                 94US-0300928.

89US-0431565.

91US-0662276.

91US-0807529.

92US-0857311.

92US-0884718.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     95US-0431184
                                                                                                                                                                                                                                                           Greenstein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          111
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 111; DB 13;
Pred. No. 2.5e-100;
; Mismatches 0;
                                                                                                                                                                                                                                                           JL,
                                                                                                                                                                                                                                                        Bond
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  111;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
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Best Local Similarity
Matches 111; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The present invention relates to the detection of sensitivity to a cat protein allergen by combining a blood sample from a subject with a peptide of human T cell reactive feline protein (hTRFP). This method and the hTRFP peptides are useful for diagnosing, preventing and treating cat allergies by reducing or abolishing an individual's allergic response to a cat allergen. DNA encoding the TRFP may be used as probes to locate equivalent sequences present in other species. These may further be used to study the mechanism of immunotherapy of cat allergy, and to design modified derivatives, analogues or functional equivalents useful in immunotherapy. The present sequence was used in the invention.
T-cell reactive feline protein; TRFP; Fel d I; cat allerger antiallergic; T cell stimulator; diagnostic; immunotherapy
                                                                                                                                                    Feline human
                                                                                                                                                                                                                                                         22-AUG-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                           AAY87673 standard; Protein; 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | DTMSGALLVLALLVTQALGYKMAETCPIFYDVFFAVANGWELLLDLSLTKVNATEPERTA 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MKKIQDCYVENGLISRVLDGLVMTTISSSKDCMGEAVQNTVEDLKLNTLGR 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%; silarity 100.0%; silarity 100.0%; sometime of the conservative of the conserva
                                                                                                                                        TRFP chain 2 long
                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ŋ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 111; DB 21;
Pred. No. 2.5e-100;
Mismatches 0;
                                                                                                                                              form protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
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28-FEB-1991;
13-DEC-1991;
25-MAR-1992;
15-MAY-1992;
15-JAN-1993;
                                   New human T cell reactive feline protein useful for reducing abolishing individual's allergic response to cat allergen cortwo different covalently linked peptide chains
                                                                                       Kuo M, Rogers BL, Gefter ML, Morgenstern Greenstein JL, Griffith IJ, Garman RD;
                                                                                                                                                                                                                 US6048962-A
                                                                                                                                                                                                                              Felis sp.
                                                                                                            (IMMU-) IMMULOGIC
                                                                                                                                                                                     27-APR-1995;
                                                                                                                                                                                                  11-APR-2000
                                                                   2000-316905/27.
DB; AAA12244
                                                                                                                          94US-0300928.

89US-0431565.

91US-0662276.

91US-0807529.

92US-0857311.

92US-0884718.

93US-0006116.
                                                                                                                                                                                    95US-0430014
                                                                                                             PHARM CORP
                                                                                               JÞ,
                                                                                                Brauer
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Claim 2; Column 75-76; 106pp; English.

invention describes a novel naturally occurring cat protein allergen human T cell reactive feline protein (TRFP), comprising two

**3**)

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RESULT
AAY90103
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CC different covalently linked peptide chains with a molecular weight of 20 CC kD, 40 kD or 130 kD under non-reducing conditions and 5 kD or 10-18 kD CC under reducing conditions. The products of the invention have CC antiallergic activity and act as human T cell stimulators. TRFP is useful CC for reducing or preventing the adverse effects of cat allergens on cat CC ellergic individuals and in ex vivo diagnostic tests to determine which CC peptides cause sensitivity so as to selectively use them to desensitize CC act sensitive individual. Purified TRFP is also useful for studying CC the mechanism of immunotherapy of cat allergy and to design modified CC derivatives, analogs or functional equivalents that are more useful in CC immunotherapy against cat allergy. DNA sequences present in other species (goats, sheep, dogs, rabbits or horses) that may be useful in diagnostics CC and/or therapeutics. Fully defined and characterized TRFP provides CC complete and a very simple desensitization therapy. This sequence CC represents a human T cell reactive feline protein (also known as Fel d I) CC chain 2, long form which is described in the method of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
                                                                   02-SEP-1994;
03-NOV-1989;
28-FEB-1991;
13-DEC-1991;
25-MAR-1992;
15-MAY-1992;
                                                                                                                                                                                                                                                                   Protein
                                                                                                                                                                                                                                                                                                             Key
                                                                                                                                                                                                                                                                                                                                                                  diagnosis;
                                                                                                                                                                                                                                                                                                                                                                                                                     Cat TRFP chain 2 long form protein sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                    13-JUL-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAY90103;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAY90103 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
 Morgenstern JP,
                                                                                                                                                                   28-APR-1995;
                                                                                                                                                                                               15-FEB-2000
                                                                                                                                                                                                                          US6025162-A
                                                                                                                                                                                                                                                                                            Peptide
                                                                                                                                                                                                                                                                                                                                        Felis
                           (IMMU-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4
                                                                                                                                                                                                                                                                                                                                                                TRFP; human T-cell reactive feline protein; cat protein allergen; e dust; Fel d I; cat allergy; Felis domesticus sensitivity; therapy; nosis; goat; sheep; horse; rabbit; dog.
                                                                                                                                                                                                                                                                                                                                        domesticus
                           IMMULOGIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              111 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                   94US-0300928.

89US-0431565.

91US-0662276.

91US-0807529.

92US-0857311.

92US-0884718.

93US-0006116.
                                                                                                                                                                   95US-0430944
                                                                                                                                                                                                                                                                /note= "signal
20..111
Griffith IJ,
                                                                                                                                                                                                                                                                                                          Location/Qualifiers
                           PHARM CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%; Score 111; DB 21; 100.0%; Pred. No. 2.5e-100;
                                                                                                                                                                                                                                                  "mature TRFP chain 2 long form"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         111 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                               peptide'
Rogers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
BL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
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AAY51470
IID AAY5
XX
AC AAY5
XX
AC AAY5
XX
DT 22-M
XX
T-GE
KW T-GE
KW GOWN
KW Sens
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HOME
KW Sens
XX
OS HOME
XX
IS O1-I

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                                                                                                                                                        03-NOV-1989;
28-FEB-1991;
13-DEC-1991;
25-MAR-1992;
15-MAY-1992;
15-JAN-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            This sequence is a peptide chain of the human T cell reactive feline protein (TRFP) of the invention. The protein is a cat protein allergen, and was isolated from a vacuum bag extract obtained by affinity purification of house dust collected from several homes with cats. TRFP is composed of two covalently linked peptide chains, and is also referred to as Fel d . TRFP and its peptides are useful for reducing or preventing the adverse effects that exposure to cat allergens normally has on cat allergic individuals (i.e. to desensitise individuals to cat allergens or block the effect of the allergens). TRFP is also used in methods of diagnosing sensitivity to Felis domesticus in an individual. DNA sequences encoding TRFP can be used as probes to locate equivalent sequences present in other species, e.g. goat, sheep, horse, rabbit and dog, that may be useful in a diagnostic and/or therapeutic applications.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               T-cell reactive feline protein; TRPP; T cell epitope; T cell receptor; down regulation; immune response; allergen; immunoglobulin E; sensitivity; cat protein allergen; human; chain 2.
                                                                                                                                                                                                                                                                                                                                                  02-SEP-1994;
                                                                                                                                                                                                                                                                                                                                                                                                      01-FEB-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                        US6019972-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human TRFP chain 2 (long form)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          22-MAY-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAY51470;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAY51470 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
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                                                                                                         (IMMU-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
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                                                    RD,
                                                                                                         IMMULOGIC PHARM CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 T cell reactive feline protein, useful
individuals to cat allergens -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     111 AA;
                                                    Greenstein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                        89US-0431565.
91US-0662276.
91US-0807529.
92US-0857311.
92US-0884718.
93US-0006116.
                                                                                                                                                                                                                                                                                                                                                  94US-0300928
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                                                    'n
                                                    Kuo
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        protein fragment.
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                                                    Briner
                                                    ŢJ,
                                                       Morville
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                                                       ĭ
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                                                       Gefter ML;
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WPI; 2000-146862/13

Garman

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Best Local S
Matches 111
                                                                                                     Bond JF,
Rogers Bl
                          WPI; 1993-152473/18
N-PSDB; AAQ41558.
                                                                                                                                                                          (IMMU-) IMMULOGIC PHARM CORP
                                                                                                                                                                                                                                                                                                    16-OCT-1992;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This invention describes a novel peptide (I) of human T cell reactive feline protein (hTRFP) having at least one T cell epitope recognized by a T cell receptor specific for the human T cell reactive feline protein, the peptide consisting of at least 7-30 amino acids, and having an amino acid sequence derived from an amino acid sequence cerived from an amino acid sequence cerived from an amino acid sequence optides, given in the specification. The peptides have reduced lumunoglobulin E binding and reduce T cell responsiveness. The peptide (I) is useful in compositions for treating sensitivity to a cat protein allergen in a subject. This sequence represents the human TRFP chain 2 (long form).
                                                                                                                                                                                                                       16-OCT-1991;
13-DEC-1991;
                                                                                                                                                                                                                                                                                                                                                       29-APR-1993
                                                                                                                                                                                                                                                                                                                                                                                                    WO9308280-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Felis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                epitope
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAR36541 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TRFP chain 2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Peptides of human T cell reactive feline protein for treating sensitivity to cat protein allergens comprise at least one T cell epitope recognized by a T cell receptor specific for the human T cell reactive feline protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      111;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cell reactive feline protein; TRFP; leader A; leader
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAZ88617
                                                                                                                          Garman RD,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
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                                                                                                                                                                                                                       91US-0777859
91US-0807529
                                                                                                                                                                                                                                                                                                 92WO-US08694
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/label= leader_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%; So
                                                                                                                       Kuo M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          109
                                                                                                                       Morgenstern JP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 111; DB 21;
Pred. No. 2.5e-100;
; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A
                                                                                                                       Morville
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 111;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
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Best Local S
Matches 109
                                                                                                                                                                                                                                                                                                                                                      25-MAR-1992;
15-MAY-1992;
15-JAN-1993;
                                       New peptide(s) for inducing tolerance - comprise one or epitope(s) of an allergen administered subcutaneously, treating sensitivity to cats, bees, etc.
                                                                                                                                             WPI; 1993-320744/40.
N-PSDB; AAQ49535.
                                                                                                                                                                                                                              Briner TJ,
Morville M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human; T cell; reactive; feline; protein; immune response; antige tolerance; mammal; Dermatophagoides; Felis; Ambrosia; Lolium; Can Cryptomeria; Alternaria; Alder; Betula; Quercus; Olea; Artemesia; Plantago; Parietaria; Blattella; Apis; Periplaneta; autoantigen.
                                                                                                                                                                                                                                                                                                   (IMMU-) IMMUNOLOGIC PHARM CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                   25-MAR-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         30-SEP-1993.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      W09319178-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human T cell reactive feline protein chain 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21-APR-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAR41985;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAR41985 standard; Protein; 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Chains 1 and 2 of the TREP have been recombinantly expressed coli and purified. T cell epitope studies using overlapping regions derived from the TREP maino acids sequence were used identify multiple T cell epitopes in each chain of TREP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Recombitope peptide having T-cell stimulating activity - for diagnosis and treatment of sensitivity to protein allergens, auto:antigens and protein antigens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Disclosure; Fig 2; 73pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       tch 98.2%; So al Similarity 100.0%; In 109; Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        109 AA;
                                                                                                                                                                                                                                                      Garman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                   92US-0857311.
92US-0884718.
93US-0006116.
                                                                                                                                                                                                                                                                                                                                                                                                                                                      93WO-US02462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note= "Signal peptide"
18..109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note= "Mature protein"
                                                                                                                                                                                                                                                   RD,
                                                                                                                                                                                                                                          Gefter ML,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 109; DB 14;
; Pred. No. 2.1e-98;
0; Mismatches 0;
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                                                                                                                                                                                                                                                Greenstein
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                                                                                                                                                                                                                                                Kuo
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Disclosure;

Fig

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107pp; English

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RESULT ANY 25593
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ID ANY 25793
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AX ANY 30-S
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XX Majc
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Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                      This invention describes a novel method of desensitizing a patient to a polypeptide allergen and comprises administering to the patient a peptide derived from the allergen where restriction to a MHC Class II molecule possessed by the patient can be demonstrated for the peptide and the peptide is able to induce a late phase response in an individual who possesses the MHC Class II molecule. The methods can be used for desensitising patients to allergens present in e.g. grass, tree and weed (including ragweed) pollens, fungi and moulds, foods, stinging insects, the content of the content
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21-SEP-1998;
09-JAN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This sequence represents chain 2 of human T cell reactive feline protein (TRFP). Peptides derived from TRFP may be used in a therapeutic composition which is useful in treating diseases which involve an immune response to a protein antigen. This composition
                                                                                                                                                                                                                                                                                                                                                                 Example
                                                                                                                                                                                                                                                                                                                                                                                                                                 Desensitizing patients to polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11-JAN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               15-JUL-1999.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Felis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cockroach;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           chiromidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Felis
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              histocompatibility complex; class II; desensitising;
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Olea, Artemesia, Plantago, Parietaria, Canis, B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Larche
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beetle; dog; horse; cow; pig; sheep; rabbit; rat; guinea pig;
il; vaccine; treatment; prevention; hypersensitivity.
                                                                                                                                                                                                                                                                                                                                                         Page 53;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               109
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98GB-0000445
(non-biting midges),
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Pred. No.
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and
   mites,
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                                                                                                                                        WPI; 1991-164136/22
                                                                                                                                                           Brauer
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                                                                                                  pure covalently linked human T cell reactive feline modified peptide(s), used to reduce effects of cat \epsilon
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Poly-A mRNA from cat parotid and mandibular glands was used to produce cDNA clones for both chain 1 and chain 2 of TRFP. These clones were then used to screen a cat genomic library. Chain 1 exists in two forms having different leader sequences (A and B). The sequence can be used to express the protein and peptide derivs which stimulate T-cells in persons allergic to cats. The peptides

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03-NOV-1989;
28-FEB-1991;
13-DEC-1991;
25-MAR-1992;
15-MAY-1992;
15-JAN-1993;
The present invention relates to the detection of sensitivity to a cat protein allergen by combining a blood sample from a subject with a peptide of human T cell reactive feline protein (hTRFP). This method and the hTRFP peptides are useful for diagnosing, preventing and treating cat allergies by reducing or abolishing an individual's allergic response to a cat allergen. DNA encoding the TRFP may be used as probes to locate equivalent sequences present in other species. These may further be used to study the mechanism of immunotherapy of cat allergy, and to design modified derivatives, analogues or
                                                                                                                                                                                                                                                                                                               Detecting, preventing and treating sensitivity to cat protein allergen comprises combining a biological sample with a human T cell reactive feline protein and determining the extent of binding that occurs -
                                                                                                                                                                                                                                                                     Disclosure; Figure 7; 106pp;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Garman RD,
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89US-0431565.

91US-0662276.

91US-0807529.

92US-0857311.

92US-0884718.

93US-0006116.
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Pred. No.
                                                                                                                                                                                                                                                                     English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 12;
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This invention describes a novel naturally occurring cat protein allergen (1), human T cell reactive feline protein (TRFP), comprising two different covalently linked peptide chains with a molecular weight of 20 kD, 40 kD or 130 kD under non-reducing conditions and 5 kD or 10-18 kD under reducing conditions. The products of the invention have antiallergic activity and act as human T cell stimulators. TRFP is useful for reducing or preventing the adverse effects of cat allergens on cat allergic individuals and in ex vivo diagnostic tests to determine which peptides cause sensitivity so as to selectively use them to desensitize a cat sensitive individual. Purified TRFP is also useful for studying the mechanism of immunotherapy of cat allergy and to design modified the mechanism of immunotherapy of cat allergy and to design modified derivatives, analogs or functional equivalents that are more useful in

Example 2; Column 81-84; 106pp; English.

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RESULT 11
AAX8768
ID AAY876
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AXX T
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Best Local S
Matches 92
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03-NOV-1989;
28-FEB-1991;
13-DEC-1991;
25-MAR-1992;
15-MAY-1992;
15-JAN-1993;
                                                                                                                                                                                                                                                                                                             New human T cell reactive feline protein useful i abolishing individual's allergic response to cat two different covalently linked peptide chains
                                                                                                                                                                                                                                                                                                                                                                                                                                              Greenstein JL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (-DWMI)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 functional equivalents useful in in sequence was used in the invention
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92; Conser
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TRFP chain 2 long
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89US-0431565.

91US-0662276.

91US-0807529.

92US-0857311.

92US-0884718.

93US-0006116.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      95US-0430014
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                feline protein; TRFP; Fel d I; cat allergen;
cell stimulator; diagnostic; immunotherapy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PHARM CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     82.9%;
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Garman RD;
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5. 6.1e-82;
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t allergen comprising
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RESULT 1
AAY51475
ID AAY5
XX AAY6
XX T-CC
KW Sens
XX US6(
XX U
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Best Local S
Matches 92
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15-MAY-1992;
15-JAN-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         immunotherapy against cat allergy. DNA sequences encoding TRFP are useful as probes to locate equivalent sequences present in other species (goats, sheep, dogs, rabbits or horses) that may be useful in diagnostics and/or therapeutics. Fully defined and characterized TRFP provides complete and a very simple desensitization therapy. This sequence represents a human T cell reactive feline protein (also known as Fel d I)
This invention describes a novel peptide (I) of human T cell reactive feline protein (hTRFP) having at least one T cell epitope recognized by a T cell receptor specific for the human T cell reactive feline protein, the peptide consisting of at least 7-30 amino acids, and having an amino acid sequence derived from an amino acid sequence comprising 94. 96. 97, 109, or 111 residues, given in the specification. The peptides down regulate the immune response to the allergen. The peptides have
                                                                                                                                                                                                                                                               Peptides of human T cell reactive feline protein sensitivity to cat protein allergens comprise at epitope recognized by a T cell receptor specific
                                                                                                                                                                                                  Example
                                                                                                                                                                                                                                                                                                                                                                       WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                       Garman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        03-NOV-1989;
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13-DEC-1991;
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                                                                                                                                                                                                                                                                                                                                                                                                                       RD,
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                                                                                                                                                                                                                                             feline
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      chain
                                                                                                                                                                                                Column 83-84; 105pp; English.
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  cat protein allergen; human; chain 2.
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91US-0807529.
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92US-0884718.
93US-0006116.
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Pred. No.
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6.1e-82;
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                                                                                                                                                                                                                                                                 for treating least one T ce for the human
                                                                                                                                                                                                                                                                                                                                                                                                                    Morville
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protein
chain 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                     Gefter ML,
Brauer AW;
                                                                                                                                                                                           03-NOV-1989;
                                                                                                                                                                                                                                                                                                                                 TRFP chain 2 -
                                                                                                                                                                                                                                                                                                                                                               AAR12123;
                                                                                                                                                                                                                                                                                                                                                                              AAR12123 standard;
                                                                                                                                N-PSDB;
                                                                                                                                                                           (IMMU-) IMMULOGIC PHARM COR
                                                                                                                                                                                                          02-NOV-1990;
                                                                                                                                                                                                                         16-MAY-1991
                                                                                                                                                                                                                                       WO9106571-A
                                                                                                                                                                                                                                                               Protein
                                                                                                                                                                                                                                                                             Peptide
                                                                                                                                                                                                                                                                                                    Felis
                                                                                                                                                                                                                                                                                                                   Human
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                                                                                                pure covalently linked human T cell reactive feline protein modified peptide(s), used to reduce effects of cat allergens to diagnose sensitivity to allergens.
                                                                                                                                                                                                                                                                                                                                                                                                                                               glvmttissskdcmgeavqntvedlklntlgr
                                                                                                                                                                                                                                                                                                                                                                                                                                 GLVMTTISSSKDCMGEAVQNTVEDLKLNTLGR 111
                                                                                                                                      1991-164136/22
                                                                                                                                                                                                                                                                                                    catus
                                                                                                                                                                                                                                                                                                                   T cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                immunoglobulin E binding and reduce T cell responsiveness. (I) is useful in compositions for treating sensitivity to a allergen in a subject. This sequence represents the human T (long form).
                                                                                                                                AAQ11840
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   92 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                             Garman
                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                    reactive
                                                                                                                                                                                                                                                                                                                                 truncated short form
                                                                                                                                                                                           89US-0431565
                                                                                                                                                                                                          90WO-US06548
                                                                                                                                                                                                                                                               /label= Leader sequence
20..97
                                                                                                                                                                                                                                                                                     Location/Qualifiers
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                                                                                                                                                            RD,
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100.0%;
                                                                                                                                                                                                                                                                                                                  feline protein; cat allergens
                                                                                                                                                             Greenstein
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Pred. No.
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produce cDNA clones for both chain I and the produce cDNA clones for both chain I clones were then used to screen a cat genomic library. Chain I exists in two forms having different leader sequences (A and B). The sequence can be used to express the protein and peptide derives which stimulate T-cells in persons allergic to cats. The peptides can be used to reduce/ellminate the allergic response partic by modificn. of lynphokine prodn. by the T-cells. They can also be used to identify epitopes responsible for sensitivity. The DNA car be used to detect comparable sequence in other species, and also

Poly-A mRNA from cat parotid and mandibular glands was used to produce cDNA clones for both chain 1 and chain 2 of TRFP. These

Claim

2

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English.

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           The present invention relates to the detection of sensitivity to a cat protein allergen by combining a blood sample from a subject with a peptide of human T cell reactive feline protein (hTRFP). This method and the hTRFP peptides are useful for diagnosing, preventing and treating cat allergies by reducing or abolishing an individual's allergic response to a cat allergen. DNA encoding the TRFP may be used as probes to locate equivalent sequences present in other species. These may further be used to study the mechanism of immunotherapy of cat allergy, and to design modified derivatives, analogues or functional equivalents useful in immunotherapy. The present
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        02-SEP-1994;
03-NOV-1989;
28-FEB-1991;
13-DEC-1991;
25-MAR-1992;
15-MAY-1992;
15-JAN-1993;
                                                                                                                                                                                                                                                                   Detecting, preventing and treating sensitivity to cat protein allergen comprises combining a biological sample with a human T cell reactive feline protein and determining the extent of binding that occurs -
    functional equivalents useful in im
sequence was used in the invention.
                                                                                                                                                                                                                                     Claim ; Figure 4; 106pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                  Gefter ML,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     T cell reactive feline protein chain 2 short form.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                28-APR-1995;
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B; AAC60104.
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83; Conserv
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larity 100.0%;
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89US-0431565.

91US-0662276.

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92US-0884718.
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3.3.6e-73;
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Matches 83
This invention describes a novel naturally occurring cat protein allergen (17), human T cell reactive feline protein (TRFP), comprising two different covalently linked peptide chains with a molecular weight of 20 kD, 40 kD or 130 kD under non-reducing conditions and 5 kD or 10-18 kD under reducing conditions. The products of the invention have antiallergic activity and act as human T cell stimulators TRFP is useful for reducing or preventing the adverse effects of cat allergens on cat allergic individuals and in ex vivo diagnostic tests to determine which peptides cause sensitivity so as to selectively use them to desensitize a cat sensitive individual. Purified TRFP is also useful for studying the mechanism of immunotherapy of cat allergy and to design modified derivatives, analogs or functional equivalents that are more useful in immunotherapy against cat allergy. DNA sequences encoding TRFP are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               28-FEB-1991;
13-DEC-1991;
25-MAR-1992;
15-MAY-1992;
15-JAN-1993;
                                                                                                                                                                                                                                                                                                                                                                 New human T cell reactive feline protein useful for reducing or abolishing individual's allergic response to cat allergen comprising two different covalently linked peptide chains
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Kuo M, Rogers BL, Gefter ML, Morgenstern Greenstein JL, Griffith IJ, Garman RD;
                                                                                                                                                                                                                                                                                                                          Claim 2; Column 77-78; 106pp; English.
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N-PSDB; AAA12245.
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03-NOV-1989;
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antiallergic;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ch 74.8%; So 1 Similarity 100.0%; F 83; Conservative 0;
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93US-0006116.
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/SIDS8/gcgdata/geneseq/geneseqp/AA1900.DAT:*
/SIDS8/gcgdata/geneseq/geneseqp/AA2000.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DTMRGALLVLALLVTQALGV......CMGEAVQNTVEDLKLNTLGR 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7, 2002, 12:10:08; Search time 23.73 Seconds (without alignments) 346.487 Million cell updates/sec
                                                                                                                                                                                                                                                                                 Length DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GenCore version 4.5 (c) 1993 - 2000 Com
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                                                                                                                                                                                    AAR27369
AAB28933
AAY87673
                                                                     AAY90103
AAY51470
AAR12121
AAR36541
AAR41985
AAY25593
AAR27370
AAB28934
                                                                                                                                                                                                                                                                                                                                                    SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Compugen
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   522463
                                      TRFP Chain #2 with T cell reactive fe Feline human TRFP Cat TRFP chain 2 1 Human TRFP chain 2 - Ion TRFP chain 2 (1th Human T cell react Felis sp. allergen the 
                                                                                                                                                                                                                                                                            Description
                          TRFP Chain
  cell reactive
                     . allergen
in #2 with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Vie.
  PF PR XX PR XX PA XX PA XX PI XX XX PI DR
                                                                                                                                                                                                            EXES
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAR27369;
WPI; 1992-331670/40
                                           Bond J, Kuo M;
                                                                                        (IMMU-) IMMULOGIC PHARM CORP
                                                                                                                                      28-FEB-1991;
                                                                                                                                                                                 20-FEB-1992;
                                                                                                                                                                                                                               17-SEP-1992.
                                                                                                                                                                                                                                                                          W09215613-A.
                                                                                                                                                                                                                                                                                                                                                protein
                                                                                                                                                                                                                                                                                                                                                                                           peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Felis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            desensitizing.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TRFP Chain #2 with C2 leader sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20-MAY-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAR27369 standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cell reactive
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458
457.5
419
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419
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128.5
128.5
128.5
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370.5
370.5
370.5
288.5
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10: 11: 12: 13: 14: 15: 16: 17: 18: 19: 20: 21:

(first entry)

111

A

ALIGNMENTS

feline protein; cat allergy; allergic; IgE;

Database

Maximum Minimum

DB DB

seq

Scoring table:

Searched:

AAB28939 AAY87680 AAY51477 AAR36548 AAB28979 AAY90145

AAR41977

Recommunication Peptide YZX. Feli TRFP fusion protei

T cell reactive fe Feline human TRFP chain 2

Peptide Z. Felis. Human T cell react Peptide Z derived Feline human TRFP

AAY90106 AAY51478 AAR27371

AAB28940 AAY87681 AAY90105 AAY51472

Human TRFP chain 2
TRFP Chain 2 - tru
T cell reactive fe
Feline human TRFP
Cat TRFP chain 2 t
Human TRFP chain 2
T cell reactive fe
Feline human TRFP
Cat TRFP chain 2
T cell reactive fe
Feline human TRFP
Cat TRFP chain 2
Human TRFP chain 2
Human TRFP chain 2
TRFP chain #2 C2ST

AAR12123 AAB28935 AAY87675

AAB28937 AAY87678 AAX51475 AAW27382 AAY25532 AAX25532 AAB28938 AAY87679 AAY51476

Human TRFP chain 2 Chain 2 of major c Human MHC Class II TRFP Chain #2 C2ST T cell reactive fe Feline human TRFP

AAY87674 AAY90104 AAY51471 AAR12122

Cat TRFP chain 2 s Human TRFP chain 2 TRFP I chain 2 - s T cell reactive fe Feline human TRFP

Feline human TRFP

Title: Perfect score:

Result

No.

Score

Por s

/label= C2 leader 19..111 Location/Qualifiers
1..19

/label= TRFP chain #2

910S-0662193 92WO-US01344

110

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g 99
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Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
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03-NOV-1989;
28-FEB-1991;
13-DECC-1991;
25-MAR-1992;
15-MAY-1992;
15-JAN-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This sequence represents a modified human T-cell reactive feline protein which stimulates T-cells from an individual who is allergic to cats, but which interacts with human IgE to a lesser extent than does affinity purified TRPP! The protein is modified by treating with either a mild alkali (pH 12.5-13.5 , KOH, NaOH, LiOH or tertiary amines) or an enzyme which removes 0-linked groups (carbohydrate modieties). It is useful in desensitising people who are allergic to cats.
                             Detecting, preventing and treating sensitivity to cat protein allergen comprises combining a biological sample with a human T cell reactive feline protein and determining the extent of binding that occurs -
            Claim 1;
                                                                         WPI; 2000-601477/57
N-PSDB; AAC60103.
                                                                                                                                                                                                                                                                                                                                                        T cell reactive feline protein chain 2 long form
                                                                                                                              (IMMU-)
                                                                                                                                                                                                                                        28-APR-1995;
                                                                                                                                                                                                                                                            19-SEP-2000
                                                                                                                                                                                                                                                                                 US6120769-A
                                                                                                                                                                                                                                                                                                     Felis sp
                                                                                                                                                                                                                                                                                                                                    Cat; allergy; human T cell
                                                                                                                                                                                                                                                                                                                                                                              29-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                   AAB28933;
                                                                                                                                                                                                                                                                                                                                                                                                                       AAB28933 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 1; Fig 1; 35pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Modified human T-cell reactive feline protein -
in individuals allergic to cats and shows reduce
histamine-releasing properties
                                                                                                                                                                                                                                                                                                                          immunotherapy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
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                                                                                                         Œ,
                                                                                                                              IMMULOGIC PHARM CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
           Figure 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    111 AA;
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hilarity 100.
Conservative
                                                                                                        Garman RD,
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                                                                                                                                                 94US-0300928.

89US-0431565.

91US-0662276.

91US-0667529.

92US-0857311.

92US-0884718.

93US-0006116.
                                                                                                                                                                                                                                        95US-0431184
           106pp;
                                                                                                                                                                                                                                                                                                                                                                                                                       Protein;
                                                                                                         Greenstein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         00%
           English.
                                                                                                                                                                                                                                                                                                                                    reactive feline protein; hTRFP;
                                                                                                                                                                                                                                                                                                                                                                                                                       111 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 552; DB 13; Pred. No. 2e-57;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                        JL,
                                                                                                         Bond
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tein - stimulates reduced
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   111;
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В
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                                                                                                                                                      Query Match
Best Local Sin
Matches 111;
                                                                                                                                                                                               The present invention relates to the detection of sensitivity to a cat protein allergen by combining a blood sample from a subject with a peptide of human T cell reactive feline protein (hTREP). This method and the hTREP peptides are useful for diagnosing, preventing and treating cat allergies by reducing or abolishing an individual's allergic response to a cat allergen. DNA encoding the TREP may be used as probes to locate equivalent sequences present in other species. These may further be used to study the mechanism of immunotherapy of cat allergy, and to design modified derivatives, analogues or functional equivalents useful in immunotherapy. The present
                                                                                                                                                    Sequence
Similarity
                                                                                                                                                                                       was used in the invention.
                                                                                                                                                      111
                                                                    Conservative
                                                                                                                                                      Ā
                                                                                  100.0%;
                                                                    0,
                                                                Score 552; DB 21; Pred. No. 2e-57; Mismatches 0;
                                                                    Indels
                                                                                                     Length 111;
                                                                    0;
                                                                  Gaps
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Q

RESULT
ANX87673
ID AAXY
XX AXX
AC AAXX
XX Fel:
T-cell reactive feline protein; TRFP; Fel d I; cat allergen; antiallergic; T cell stimulator; diagnostic; immunotherapy. Felis sp. Feline human TRFP chain 2 long 22-AUG-2000 AAY87673; AAY87673 standard; Protein; (first entry) 111 form protein Ą

02-SEP-1994; 03-NOV-1989; 28-FEB-1991; 13-DEC-1991; 25-MAR-1992; 15-MAY-1992; 15-JAN-1993; 27-APR-1995 US6048962-A 11-APR-2000 94US-0300928. 89US-0431565. 91US-0662276. 91US-0807529. 92US-0857311. 95US-0430014

(IMMU-) IMMULOGIC PHARM CORP

92US-0884718. 93US-0006116.

Kuo M, Rogers Greenstein JL, BL, Gefter ML, Griffith IJ, , Morgenstern Garman RD; ď, Brauer AW;

2000-316905/27. DB; AAA12244.

N-PSDB;

New human T cell reactive feline protein useful for reducing or abolishing individual's allergic response to cat allergen comprising two different covalently linked peptide chains

Claim 2 75-76; 106pp; English.

This invention describes a novel naturally occurring cat protein allergen (I), human T cell reactive feline protein (TRFP), comprising two

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CC different covalently linked peptide chains with a molecular weight of 20 CC kD, 40 kD or 130 kD under non-reducing conditions and 5 kD or 10-18 kD CC under reducing conditions. The products of the invention have CC antiallergic activity and act as human T cell stimulators. TRFP is useful CC for reducing or preventing the adverse effects of cat allergens on cat CC allergic individuals and in ex vivo diagnostic tests to determine which CC peptides cause sensitivity so as to selectively use them to desensitize CC a cat sensitive individual. Purified TRFP is also useful for studying CC the mechanism of immunotherapy of cat allergy and to design modified CC derivatives, analogs or functional equivalents that are more useful in immunotherapy against cat allergy. DNA sequences encoding TRFP are CC useful as probes to locate equivalent sequences present in other species (goats, sheep, dogs, rabbits or horses) that may be useful in diagnostics and/or therapeutics. Fully defined and characterized TRFP provides CC complete and a very simple desensitization therapy. This sequence CC represents a human T cell reactive feline protein (also known as Fel d I) CC chain 2, long form which is described in the method of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local
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                                                                         02-SEP-1994;
03-NOV-1989;
28-FEB-1991;
13-PEC-1991;
13-MAR-1992;
15-MAR-1992;
                                                                                                                                                                                                                                                                                            Protein
                                                                                                                                                                                                                                                                                                                                                                       Felis domesticus
                                                                                                                                                                                                                                                                                                                                                                                                    diagnosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Cat TRFP chain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               13-JUL-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAY90103;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAY90103 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
   Morgenstern JP,
                                                                                                                                                                                    28-APR-1995;
                                                                                                                                                                                                                   15'-FEB-2000
                                                                                                                                                                                                                                                 US6025162-A
                                                                                                                                                                                                                                                                                                                         Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                    house
                               (IMMU-)
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                                                                                                                                                                                                                                                                                                                                                                                                               TRFP; human T-cell reactive feline protein; cat protein allergen; e dust; Fel d I; cat allergy; Felis domesticus sensitivity; therapy;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IMMULOGIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        111 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                         94US-0300928.

89US-0431565.

91US-0662276.

91US-0807529.

92US-0857311.

92US-0884718.

93US-0066116.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               2 long form protein sequence.
                                                                                                                                                                                    95US-0430944
                                                                                                                                                                                                                                                                                         /note= "signal peptide"
20..111
                                                                                                                                                                                                                                                                                                                                                                                                    sheep;
                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
   Griffith IJ,
                               PHARM CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Protein; 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%;
                                                                                                                                                                                                                                                                          "mature TRFP chain 2 long
                                                                                                                                                                                                                                                                                                                                                                                                      horse;
                                                                                                                                                                                                                                                                                                                                                                                                    allergy; Felis
horse; rabbit; (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0,
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Pred. No. 2e-57;
 Rogers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A
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   BL;
                                                                                                                                                                                                                                                                                                                                                                                                    dog.
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                                                                                                                                                                                                                                                                            form"
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Qy

Query Match Best Local S Matches 111

Similarity

100.0%;

Conservative

0;

Score 552; D Pred. No. 2e-D; Mismatches

2e-57; DB 21;

Length Indels

0;

0;

Gaps

0;

B Ω<sub>γ</sub>

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This sequence is a peptide chain of the human T cell reactive feline protein (TRFP) of the invention. The protein is a cat protein allergen, and was isolated from a vacuum bag extract obtained by affinity purification of house dust collected from several homes with cats. TRFP is composed of two covalently linked peptide chains, and is also referred to as Fel d I. TRFP and its peptides are useful for reducing or preventing the adverse effects that exposure to cat allergens normally has on cat allergic individuals (i.e. to desensitise individuals to cat allergens or block the effect of the allergens). TRFP is also used in methods of diagnosing sensitivity to Felis domesticus in an individual. DNA sequences encoding TRFP can be used as probes to locate equivalent sequences present in other species, e.g. goat, sheep, horse, rabbit and dog, that may be useful in a diagnostic and/or therapeutic applications.
                                                                                                                                                                                                                                                                                                                                                                                                                                               New human {\tt T} cell reactive feline protein, useful for desensitizing allergic individuals to cat allergens -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2000-181812/16.
N-PSDB; AAA07437.
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                   Claim 1; Fig 3; 108pp; English.
  111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cat
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AAY51470
ID AAY5
                                                                                                                                                                                                                                                                                                                                           RESULT
 03-NOV-1989;
28-FEB-1991;
13-DEC-1991;
25-MAR-1992;
15-MAY-1992;
15-JAN-1993;
                                                                                                                                                                                      T-cell reactive feline protein; TRFP; T cell epitope; T celdown regulation; immune response; allergen; immunoglobulin sensitivity; cat protein allergen; human; chain 2.
                                                                                                                                                                                                                                        Human TRFP chain 2 (long
                                                                                      02-SEP-1994;
                                                                                                               01-FEB-2000
                                                                                                                                       US6019972-A
                                                                                                                                                                                                                                                                  22-MAY-2000
                                                                                                                                                                                                                                                                                                                  AAY51470 standard;
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                                                                                                                                                                                                                                                                                                                                                                               (first entry)
89US-0431565.
91US-0662276.
91US-0807529.
92US-0857311.
92US-0884718.
93US-0006116.
                                                                                      94US-0300928
                                                                                                                                                                                                                                                                                                                  Protein; 111
                                                                                                                                                                                                                                        form)
                                                                                                                                                                                                                                         protein fragment.
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                                                                                                                                                                                                               T cell receptor;
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Garman

RD,

Greenstein

JL,

Kuo

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Briner

ŢJ,

Morville

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Gefter ML;

2000-146862/13.

( - DWMI )

IMMULOGIC PHARM CORP

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RESULT
AART2121
XX
XC AAR
XC AAR
XX TREF
DX Fel.
XX Huma
XX Fel.
XX Fel.
XX Fel.
XX Fel.
XX Fel.
XX O9.
FT Pro
FT 
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This invention describes a movel peptide (I) of human T cell reactive feline protein (hTRFP) having at least one T cell epitope recognized by a T cell receptor specific for the human T cell reactive feline protein, the peptide consisting of at least 7-30 amino acids, and having an amino acid sequence derived from an amino acid sequence derived from an amino acid sequence comprising 94, 96, 97, 109, or 111 residues, given in the specification. The peptides have reduced immunoglobulin E binding and reduce T cell responsiveness. The peptide (I) is useful in compositions for treating sensitivity to a cat protein allergen in a subject. This sequence represents the human TRFP chain 2 (long form).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Key
Peptide
                                WPI; 1991-164136/22.
N-PSDB; AAQ11838.
                                                                                                                      Gefter ML,
Brauer AW;
                                                                                                                                                                                                                 (IMMU-) IMMULOGIC PHARM COR.
                                                                                                                                                                                                                                                                          03-NOV-1989;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Felis catus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human T cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TRFP chain 2 - long form.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              26-JUL-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAR12121;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAR12121 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 1; Column 75-78; 105pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Peptides of human T cell reactive feline protein for treating sensitivity to cat protein allergens comprise at least one T cell epitope recognized by a T cell receptor specific for the human T cell reactive feline protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N-PSDB; AAZ88617.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         111
                                                                                                                                                   Garman RD,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       reactive feline
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Jocation/Qualifiers
3.19
/label- Leader sequence
20.111
/label- TRPP I long form
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         $
                                                                                                                                                                                                                                                                          89US-0431565
                                                                                                                                                                                                                                                                                                                                90WO-US06548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%;
                                                                                                                                                   Greenstein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  111 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       protein; cat allergens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 552; DB 21;
Pred. No. 2e-57;
); Mismatches 0;
                                                                                                                                                   JĽ,
                                                                                                                                                   Juo
                                                                                                                                                   ĭ
                                                                                                                                                   Rogers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 111;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
RESULT

AAR36541

ID AAR

XX AAR

XX Hum

KW Hum

KW epi:

XX Fel.

XX Fel.

XX Fel.

XX Fel.

XX Fel.

XX Hum

KW epi:

XX Fel.

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Key
Peptide
                                                                                                                                                                            Bond JF,
                                                                                                                                                                                                                                                                                                                                                                                                                                                       29-APR-1993.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Felis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TRFP chain 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAR36541;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                            Rogers
                                                                                                                                                                                                                                      (IMMU-) IMMULOGIC PHARM CORP
                                                                                                                                                                                                                                                                                                                                                                                          16-OCT-1992;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO9308280-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human T cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           12-AUG-1993
                                                                                                                                                                                                                                                                                                16-OCT-1991;
13-DEC-1991;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7
                                                             AAQ41558
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New pure covalently linked human T cell reactive feline protein and modified peptide(s), used to reduce effects of cat allergens and to diagnose sensitivity to allergens.
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Claim 2; Fig 3; 70pp; English

poly-A mRNA from cat parotid and mandibular glands was used to produce cDNA clones for both chain 1 and chain 2 of TRFP. These clones were then used to screen a cat genomic library. Chain 1 exists in two forms having different leader sequences (A and B). The sequence can be used to express the protein and peptide derivs which stimulate T-cells in persons allergic to cats. The peptides can be used to reduce/eliminate the allergic response partic. by modifion of lynphokine prodn. by the T-cells. They can also be used to detect comparable sequence in other species, and also for prodn. of modified forms of TRFP esp. showing reduced binding to IgE and thus reduced tendency to cause adverse reactions.

111 AA;

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Query Match 99.1%;
Best Local Similarity 99.1%;
Matches 110; Conservative
61 MKKIQDCYVENGLISRYLDGLYMTTISSSKDCMGEAVQNTVEDKLNTLGR 111
61 mkKiqdcyvenglisrvldglymttissskdcmgeavqnnvedlklntlgr 111
                                                        Score 547; DB 12;
Pred. No. 7.8e-57;
0; Mismatches 1;
                                                                                                                                                   Length 111;
                                                                                                                      Indels
                                                                                                                      0;
                                                                                                                      Gaps
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0;

AAR36541 standard; Protein; 109 Ā

reactive feline protein; TRFP; leader (with Leader). (first entry) A.

leader

Location/Qualifiers /label= leader\_peptide

91US-0777859. 91US-0807529. 92WO-US08694

Garman RD, Kuo M, Morgenstern JP, Morville

Recombitope peptide having T-cell stimulating activity for

SXCCCCXXX

0;

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Qy
RESULT
AAR41985
ID AAR4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local S
Matches 109
                                                                                                                                                25-MAR-1992;
15-MAY-1992;
15-JAN-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              diagnosis and treatment of sensitivity auto:antigens and protein antigens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Chains
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Disclosure; Fig
                                                                                                                                                                                                                                                           Protein
                                                                                                                                                                                                                                                                                        Key
                                                                                                                                                                                                                                                                                                                            Human; T cell; reactive; feline; protein; immune response; antigen; tolerance; mammal; Dermatophagoides; Felis; Ambrosia; Lolium; Canis; Cryptomeria; Alternaria; Alder; Betula; Quercus; Olea; Artemesia; Plantago; Parietaria; Blattella; Apis; Periplaneta; autoantigen.
                                                                                                                                                                                                                                                                                                                                                                                                                                         AAR41985 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Chains 1 and 2 of the TRFP have been recombinantly expressed coll and purified. T cell epitope studies using overlapping regions derived from the TRFP amino acids sequence were used identify multiple T cell epitopes in each chain of TRFP.
         Disclosure; Fig
                                     New peptide(s) for inducing tolerance - comprise one or more epitope(s) of an allergen administered subcutaneously, for
                                                                   N-PSDB;
                                                                             WPI;
                                                                                                         Briner TJ,
                                                                                                                                                                                       25-MAR-1993;
                                                                                                                                                                                                           30-SEP-1993
                                                                                                                                                                                                                               W09319178-A
                                                                                                                                                                                                                                                                             Peptide
                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                               Human
                                                                                                 Morville
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 _
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                  1993-320744/40.
DB; AAQ49535.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MRGALLVLALLVTQALGVKMAETCPIFYDVFFAVANGNELLLDLSLTKVNATEPERTAMK 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       109;
                                                                                                                                                                                                                                                                                                                                                                               T cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                              IMMUNOLOGIC
                            sensitivity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        109 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                          Garman
                                                                                                                                                                                                                                                                                                                                                                              reactive feline protein chain
                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                               92US-0857311.
92US-0884718.
93US-0006116.
                                                                                                                                                                                       93WO-US02462
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2;
         ?
                                                                                                                                                                                                                                                         /note=
18..109
                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          73pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                        Protein;
        107pp;
                                                                                                         RD,
                                                                                                                              PHARM
                                                                                                                                                                                                                                                            109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                98.0%;
                             ç
                                                                                                                                                                                                                                                                  "Signal
                                                                                                                                                                                                                                                "Mature protein"
                                                                                                         Gefter ML,
                             cats, bees,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            English.
                                                                                                                                                                                                                                                                                                                                                                                                                                          109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 541;
Pred. No.
                                                                                                                                                                                                                                                                   peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                          A
                             etc.
                                                                                                         Greenstein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          to protein allergens,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3.9e-56;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DВ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                         JĽ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                          Kuo
                                                                                                          Z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     peptide
to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ín
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ħ
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AAY25593
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
Matches 109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This sequence represents chain 2 of human T cell reactive feline protein (TREP). Peptides derived from TREP may be used in a therapeutic composition which is useful in treating diseases which involve an immune response to a protein antigen. This composition may be used to induce tolerance in a mammal to Dermatophagoides, may be used to induce tolerance in a mammal to Dermatophagoides,
This invention describes a novel method of desensitizing a patient to a polypeptide allergen and comprises administering to the patient a peptide derived from the allergen where restriction to a MHC Class II molecule possessed by the patient can be demonstrated for the peptide and the peptide is able to induce a late phase response in an individual who possesses the MHC Class II molecule. The methods can be used for desensitising patients to allergens present in e.g. grass, tree and weed (including ragweed) pollens, fungi and moulds, foods, stinging insects, the chiromidae (non-biting midges), spiders and mites, housefly, fruit fly, sheep blow fly, screw worm fly, grain weevil, silkworm, honeybee,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Major histocompatibility complex; class II; desensitising; hum allergen; grass; tree; weed; pollen; fungi; mould; food; insec chiromidae; spider; mite; housefly; fruit fly; sheep blow fly; screw worm fly; grain weevil; silkworm; bee moth; larvae; meal cockroach; beetle; dog; horse; cow; pig; sheep; rabbit; rat; g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Felis, Ambrosia, Lolium, Cryptomeria, Alternaria, Alder, Betula, Quercus, Olea, Artemesia, Plantago, Parietaria, Canis, Blattella, Apis, Periplaneta and to autoantigens in humans.
                                                                                                                                                                                                                                                                                                                                      21-SEP-1998;
09-JAN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                            Example 6;
                                                                                                                                                                                                        Desensitizing patients to polypeptide
                                                                                                                                                                                                                                         WPI; 1999-458255/38
                                                                                                                                                                                                                                                                                                        (IMCO-)
                                                                                                                                                                                                                                                                                                                                                                                  11-JAN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                 15-JUL-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Felis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Felis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        30-SEP-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAY25593;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAY25593 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MRGALLVLALLYTQALGYKMAETCPIFYDVFFAVANGNELLLDLSLTKVNATEPERTAMK 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KIQDCYVENGLISRVLDGLVMTTISSSKDCMGEAVQNTVEDLKLNTLGR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                109;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gerbil;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sp. allergen 1082946 Fel dI chain 2 precursor protein fragment.
                                                                                                                                                                                                                                                                                                        IMPERIAL COLLEGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                         Larche M;
                                                                                                                                                                         Page 53; 117pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              vaccine; treatment; prevention; hypersensitivity
                                                                                                                                                                                                                                                                                                                                      98GB-0020474
98GB-0000445
                                                                                                                                                                                                                                                                                                                                                                                    99WO-GB00080
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              98.0%;
                                                                                                                                                                                                                                                                                                        INNOVATIONS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 541; DB 14; Pred. No. 3.9e-56;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ₽
                                                                                                                                                                                                          allergens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 109;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           larvae; mealworm;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           insect;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           human;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            guinea
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             honeybee;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              sting;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cat;
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000000xx

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Query Match
Best Local S
Matches 109
                      This sequence represents a modified human T-cell reactive feline protein which stimulates T-cells from an individual who is allergic to cats, but which interacts with human 1gE to a lesser extent than does affinity purified TRPP. The protein is modified by treating with either a mild alkali (pH 12.5-13.5 , KOH, NBOH, LiOH OF TERTIATY amines) or an enzyme which removes 0-linked groups (carbohydrate moietties). It is useful in desensitising people who are allergic to ca
                                                                                                                                                                Modified human T-cell reactive feline protein - stimulates T-cell in individuals allergic to cats and shows reduced histamine-releasing properties
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                non-biting midge larvae, bee moth larvae, mealworm, cockroach, larvae of Tenibrio molitor beetle, mammals such as cat, dog, horse, cow, pig, sheep, rabbit, rat, guinea pig, mice or gerbil. They can also be used to produce immunological vaccines which may be used to prevent and/or treat conditions involving hypersensitivity to allergens. This sequence represents the cat allergen | 1082946 Fel dI chain 2 precursor.
                                                                                                                                        Claim 1; Fig 1; 35pp; English
                                                                                                                                                                                                                            WPI; 1992-331670/40
                                                                                                                                                                                                                                                      Bond J, Kuo
                                                                                                                                                                                                                                                                                 (IMMU-) IMMULOGIC PHARM CORF
                                                                                                                                                                                                                                                                                                                28-FEB-1991;
                                                                                                                                                                                                                                                                                                                                         20-FEB-1992;
                                                                                                                                                                                                                                                                                                                                                                      17-SEP-1992
                                                                                                                                                                                                                                                                                                                                                                                                  WO9215613-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Felis domesticus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          desensitizing.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TRFP Chain #2 with C2 leader
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20-MAY-1998 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAR27370 standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      cell reactive feline protein; cat allergy; allergic; IgE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tch 98.0%; So al Similarity 100.0%; I 109; Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        109 AA;
                                                                                                                                                                                                                                                                                                                91US-0662193
                                                                                                                                                                                                                                                                                                                                         92WO-US01344
                                                                                                                                                                                                                                                                                                                                                                                                                             /label= C2 leader
19..110
/label= TRFP chai
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    110 AA
                                                                                                                                                                                                                                                                                                                                                                                                                             chain #2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 541; DB 20;
Pred. No. 3.9e-56;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 109;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0;
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                           cats
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AAB28934
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Best Local Sim
Matches 105;
                                                                                                                                                                                                                                                                                                                                                                28-FEB-1991;
13-DEC-1991;
25-MAR-1992;
15-MAY-1992;
15-JAN-1993;
                   The present invention relates to the detection of sensitivity to a cat protein allergen by combining a blood sample from a subject with a peptide of human T cell reactive feline protein (hTRFP). This method and the hTRFP peptides are useful for diagnosing, preventing and treating cat allergies by reducing or abolishing an individual's allergic response to a cat allergen. DNA encoding the TRFP may be used as probes to locate equivalent sequences present in other species. These may further be used to study the mechanism of immunotherapy of cat allergy, and to design modified derivatives, analogues or functional equivalents useful in immunotherapy. The present sequence was used in the invention.
                                                                                                                                                                                                            Detecting, preventing and treating sensitivity to cat protein allergen comprises combining a biological sample with a human T cell reactive feline protein and determining the extent of binding that occurs
                                                                                                                                                                                     Claim ; Figure 4; 106pp; English.
                                                                                                                                                                                                                                                                                                          Gefter ML, Garman RD,
                                                                                                                                                                                                                                                                                                                                                                                                                                  02-SEP-1994;
03-NOV-1989;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US6120769-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cat; allergy; human T cell reactive feline protein; hTRFP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      T cell reactive
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                29-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAB28934 standard; Protein;
                                                                                                                                                                                                                                                                                                                                      (IMMU-) IMMULOGIC PHARM CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       28-APR-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 19-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Felis sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               lmmunotherapy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 mkKigQCyVengLiSRYLDGLVMTTISSKKDCMGEAVQNTYEDLKLNTLGR 111
61 mkKigQCyVengliSrVLdglVm1ai-neydcmgeavqntvedlklntlgr 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2000-601477/57.
DB; AAC60104.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                                              94US-0300928.

89US-0431565.

91US-0662276.

91US-0807529.

92US-0857311.

92US-0884718.

93US-0006116.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       95US-0431184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      feline
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     92.88;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     protein chain 2 short form.
                                                                                                                                                                                                                                                                                                            Greenstein JL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 512.5; DB 13; Pred. No. 8.9e-53; l; Mismatches 4;
                                                                                                                                                                                                                                                                                                             Bond
                                                                                                                                                                                                                                                                                                            Œ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
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Query Match

Score 506;

DΒ 21;

Length

109

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RESULT
AAY87674
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13-DEC-1991;
25-MAR-1992;
15-MAY-1992;
15-JAN-1993;
                                                                                                      (1), human T cell reactive feline protein (TRPP), comprising two different covalently linked peptide chains with a molecular weight of 20 kD, 40 kD or 130 kD under non-reducing conditions and 5 kD or 10-18 kD under reducing conditions. The products of the invention have antiallergic activity and act as human T cell stimulators. TRPP is useful for reducing or preventing the adverse effects of cat allergens on cat allergic individuals and in ex vivo diagnostic tests to determine which peptides cause sensitivity so as to selectively use them to desensitize a cat sensitive individual. Purified TRPP is also useful for studying
                                                                                                                                                                                                                                                                                                                                                                                   Kuo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   T-cell reactive antiallergic; T
immunotherapy against cat allergy. DNA sequences encoding TRFP are useful as probes to locate equivalent sequences encoding TRFP are (goats, sheep, dogs, rabbits or horses) that may be useful in diagnostics and/or therapeutics. Fully defined and characterized TRFP provides complete and a very simple desensitization therapy. This sequence represents a human T cell reactive feline protein (also known as Fel d I)
                                                                                                                                                                                                                                                    Claim
                                                                                                                                                                                                                                                                                         New human T cell reactive feline protein useful for reduci
abolishing individual's allergic response to cat allergen
                                                                                                                                                                                                                                                                                                                                                                        Greenstein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     02-SEP-1994;
03-NOV-1989;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US6048962-A
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAY87674 standard;
                                                                                                                                                                                                                                                                                                                                                                                                             (-DWMI)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             27-APR-1995;
                                                                                           the mechanism of immunotherapy of cat allergy and to design modified
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                                                                                                                                                                                                                                                                             different covalently linked peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DTMRGALLVLALLVTQALGVKMAETCPIFYDVFFAVANGNELLLDLSLTKVNATEPERTA
                                                                                                                                                                                                                         invention describes a novel naturally occurring cat protein allerger
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      dtmrgallvlallvtqalgvkmaetcpifydvffavangnellldlsltkvnateperta
                                                                                                                                                                                                                                                                                                                                  2000-316905/27.
)B; AAA12245.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          104;
                                                                                                                                                                                                                                                                                                                                                                    Rogers
ein JL,
                                                                                                                                                                                                                                                                                                                                                                                                             IMMULOGIC
                                                                                                                                                                                                                                                      Column
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TRFP chain 2 short form protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                                                                                                                                                                                       Griffith
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92US-
93US-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           91US-
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89US-0431565
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             95US-0430014
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cell stimulator;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               feline
                                                                                                                                                                                                                                                      77-78;
                                                                                                                                                                                                                                                                                                                                                                                                             PHARM CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                     3-0662276.
3-0807529.
3-0857311.
3-0884718.
3-0006116.
                                                                                                                                                                                                                                                                                                                                                                                  Gefter ML,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       93.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               protein; TRFP; Fel d I;
                                                                                                                                                                                                                                                    106pp; English
                                                                                                                                                                                                                                                                                                                                                                        ĽĮ,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pred. No.
                                                                                                                                                                                                                                                                                                                                                                        Garman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                   Morgenstern
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 diagnostic; immunotherapy
                                                                                                                                                                                                                                                                                                                                                                        RD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5.1e-52;
2;
                                                                                                                                                                                                                                                                                chains
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cat allergen;
                                                                                                                                                                                                                                                                                                     for reducing or
                                                                                                                                                                                                                                                                                                                                                                                   Brauer
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                                                                                                                                                                                                                                                                                         comprising
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2;
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                                                                                                                                                            useful
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AAY90104
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Best Local S
Matches 104
                                                                                                                                                                                                             28-FEB-1991;
13-DEC-1991;
25-MAR-1992;
15-MAY-1992;
This sequence is a peptide chain of the human T cell reactive feline protein (TRPP) of the invention. The protein is a cat protein allergen, and was isolated from a vacuum bag extract obtained by affinity purification of house dust collected from several homes with cats. TRPP is composed of two covalently linked peptide chains, and is also referred to as Fel d I. TRPP and its peptides are useful for reducing or preventing the adverse effects that exposure to cat allergens normally
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          chain
                                                                                                                                                                                                                                                  02-SEP-1994;
03-NOV-1989;
                                                                                                                                                                                                                                                                                                                                                                                 Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Cat TRFP chain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAY90104;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAY90104 standard;
                                                                              Claim
                                                                                                allergic
                                                                                                                               N-PSDB;
                                                                                                                                                            Morgenstern JP,
                                                                                                                                                                               (IMMU-)
                                                                                                                                                                                                  15-MAY-1992;
15-JAN-1993;
                                                                                                                                                                                                                                                                                28-APR-1995
                                                                                                                                                                                                                                                                                                   15-FEB-2000
                                                                                                                                                                                                                                                                                                                      US6025162-A
                                                                                                                                                                                                                                                                                                                                                   Protein
                                                                                                                                                                                                                                                                                                                                                                       Peptide
                                                                                                                                                                                                                                                                                                                                                                                                   Felis
                                                                                                                                                                                                                                                                                                                                                                                                                                 house
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  13-JUL-2000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 DTMRGALLVLALLVTQALGVKMAETCPIFYDVFFAVANGNELLLDLSLTKVNATEPERTA
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                                                                                                                                                                                                                                                                                                                                                                                                                                           TRFP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2000-181812/16
DB; AAA07438.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MKKIQDCYVENGLISRVLDGLVMTTISSSKDCMGEAVQNTVEDLKLNTLGR
                                                                                                                                                                                                                                                                                                                                                                                                                                dust;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          'n
                                                                                                                                                                               IMMULOGIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                             Fig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          short
                                                                                                 n T cell reactive individuals to ca
                                                                                                                                                                                                                                                                                                                                                                                                                                 human T-c; Fel d I;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       109
                                                                                                                                                                                                                                                                                                                                                                                                                       goat;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                              4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                                                                                                                                                 94US-0300928.

89US-0431565.

91US-0662276.

91US-0807529.

92US-0857311.

92US-0884718.

93US-0006116.
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                                                                                                                                                                                                                                                                               95US-0430944
                                                                            108pp;
                                                                                                                                                                                                                                                                                                                                                                                                                       T-cell reactive feline protein; cad I; cat allergy; Felis domesticus sheep; horse; rabbit; dog.
                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                              short form
                                                                                                                                                            Griffith
                                                                                                                                                                                                                                                                                                                                                             /note=
                                                                                                                                                                                PHARM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          which
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               91.7%;
93.7%;
                                                                             English.
                                                                                                                                                                                                                                                                                                                                          "mature TRFP chain
                                                                                                                                                                                                                                                                                                                                                           "signal peptide"
                                                                                                                                                                                CORP
                                                                                                  cat allergens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          is
                                                                                                   feline protein,
at allergens –
                                                                                                                                                            ĽI,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         109
                                                                                                                                                                                                                                                                                                                                                                                                                                                              protein sequence.
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Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          described in
                                                                                                                                                           Rogers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               506;
No. 5.
                                                                                                                                                            BL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 21;
.1e-52;
                                                                                                                                                                                                                                                                                                                                          2 short form"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          the method
                                                                                                          useful
                                                                                                                                                                                                                                                                                                                                                                                                                                cat protein allergen; us sensitivity; therap
                                                                                                           for desensitizing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             111
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
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Best I
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28-FEB-1991;
13-DEC-1991;
25-MAR-1992;
15-MAY-1992;
15-JAN-1993;
This invention describes a novel peptide (I) of human T cell reactive feline protein (hTRFP) having at least one T cell epitope recognized by a T cell receptor specific for the human T cell reactive feline protein, the peptide consisting of at least 7-30 amino acids, and having an amino acid sequence derived from an amino acid sequence comprising 9, 97, 109, or 111 residues; given in the specification. The peptides down regulate the immune response to the allergen. The peptides have
                                                                                                                                                                                                                                                                         Peptides of human T cell reactive feline protein sensitivity to cat protein allergens comprise at epitope recognized by a T cell receptor specific reactive feline protein -
                                                                                                                                                                                                                         Claim 1; Column 79-80; 105pp;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      T-cell reactive feline protein; TRPP; T cell epitope; T cell down regulation; immune response; allergen; immunoglobulin E; sensitivity; cat protein allergen; human; chain 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             has on cat allergic individuals (i.e. to desensitize individuals to cat allergens or block the effect of the allergens). TRFP is also used in methods of diagnosing sensitivity to Felis domesticus in an individual. DNA sequences encoding TRFP can be used as probes to locate equivalent sequences present in other species, e.g. goat, sheep, horse, rabbit and dog, that may be useful in a diagnostic and/or therapeutic applications
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91US-0662276.
91US-0807529.
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92US-0884718.
93US-0006116.
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Pred. No. 5.1e-52;
3; Mismatches 2;
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Matches 104
Poly-A mRNA from cat parotid and mandibular glands was used to produce cDNA clones for both chain 1 and chain 2 of TRFP. These clones were then used to screen a cat genomic library. Chain 1 exists in two forms having different leader sequences (A and B). The sequence can be used to express the protein and peptide derivs which stimulate T-cells in persons allergic to cats. The peptides can be used to reduce/eliminate the allergic response partic. by modificn. of lymphokine prodn. by the T-cells. They can also be used to identify epitopes responsible for sensitivity. The DNA can be used to detect comparable sequence in other species, and also be
                                                                                                                                                                                                                                        Gefter
Brauer
                                                                                                                                Claim 2; Fig 4; 70pp; English.
                                                                                                                                                                                                      WPI; 1991-164136/22.
N-PSDB; AAQ11839.
                                                                                                                                                                                                                                                                                               03-NOV-1989;
                                                                                                                                                                                                                                                                                                                                                                                                                           Key
Peptide
                                                                                                                                                       New pure covalently linked human T cell reactive feline protein and modified peptide(s), used to reduce effects of cat allergens and to diagnose sensitivity to allergens.
                                                                                                                                                                                                                                                                        (IMMU-) IMMULOGIC PHARM COR.
                                                                                                                                                                                                                                                                                                                     02-NOV-1990;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human T cell
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                                                                                                                                                                                                                                                                                                                                             16-MAY-1991
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04; Conservative
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31.19
Leader sequence
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/label= TRFP I short form
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93.7%;
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Copyright (c) 1993 - 2000 Compugen
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/cgn2_6/ptodata/2/iaa/6B_COMB.pep:*
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US-08-300-928C-13
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Sequence 4, Appli
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Sequence 10, Appl
Sequence 11, Appl
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Sequence 14, Appl
Sequence 15, Appl
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                                                                                                                                                                                                                                                                                                         Description
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Matches 111; Conserv
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; MOLECULE TYPE:
; FRAGMENT TYPE:
US-07-662-193-4
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                                                                               REFERENCE/DOCKET NUMBER: IML8
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 227-7400
TELEPAX: (617) 227-5941
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 111 amino acids
TYPE: AMINO ACID
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 4, Application Patent No. 5328991 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         28
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31
32
                                                                                                                                                                PRIOR APPLICATION NUMBER: US 07/662,276
APPLICATION NUMBER: US 07/662,276
ETLING DATE: 28-FEB-1991
ATTORNEY/AGENT INFORMATION:
NAME: Mandragouras, Amy E.
REGISTRATION NUMBER: P36,207
REGISTRATION NUMBER: IML89-02AA/IPC-002CC/IMI-020
                                                                                                                                                                                                                                                                                                                                                                                                                CORRESPONDENCE ADDRESS:
ADDRESSEE: LAHIVE & COCKFIELD
STREET: 60 State Street, Suite 510
                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Kuo, Mei-chang
APPLICANT: Bond, Julian
TITLE OF INVENTION: Improved Preparation of Cat Dander
TITLE OF INVENTION: Allergens for Immunotherapeutic Pu
NUMBER OF SEQUENCES: 8
                                                                                                                                                                                                                                                                         SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/662,193
FILING DATE: 19910228
                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM: MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                  CLASSIFICATION: 514
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                              STREET: 60 St
CITY: Boston
STATE: MA
COUNTRY: USA
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OPERATING SYSTEM: PC-DOS/MS-DOS
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US-08-431-184-19
US-08-430-944D-19
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US-08-430-944D-19
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US-08-431-184-10
US-08-430-944D-19
US-08-431-184-10
US-08-431-184-103
US-08-431-184-103
US-08-431-184-103
 Score 111; DB 1;
Pred. No. 1.1e-102;
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Conservative

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Mismatches

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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ASCII text
CURRENT APPLICATION DATA:
APPLICATION UNMBER: US/08/300,928C
FILING DATE: September 2, 1994
CLASSIFICATION: 435
PRIOR APPLICATION UNMBER: 07/807,529
FILING DATE: December 13, 1991
CLASSIFICATION: 435
APPLICATION UNMBER: 07/807,529
FILING DATE: December 13, 1991
CLASSIFICATION: 435
APPLICATION UNMBER: 002.6US
REGISTRATION NUMBER: 002.6US
REGISTRATION NUMBER: 002.6US
TELEPHONE: (617) 227-7400
TELEPHONE: (617) 227-7400
                                                                                                      RESULT 3
US-08-430-944D-6
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; TYPE: linear
; MOLECULE TYPE: protein
US-08-300-928C-6
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             Sequence 6, Application US/08430944D Patent No. 6025162
GENERAL INFORMATION:
APPLICANT: Bruce L. Rogers et al.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 6, Application US/08300928C Patent No. 6019972 GENERAL INFORMATION:
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Best Local Similarity
Matches 111; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEFAX: (617) 227-5941
INFORMATION FOR SEQ ID NO: 6:
SEQUENCE CHARACTERISTICS:
LENGTH: 111 amino acids
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TITLE OF INVENTION: PEPTIDES FOR HUMAN T CELL REACTIVE FELINE
TITLE OF INVENTION: PROTEIN (TRFP)
NUMBER OF SEQUENCES: 101
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                61 MKKIQDCYVENGLISRVLDGLYMTTISSSKDCMGEAVQNTVEDLKLNTLGR 111
61 MKKIQDCYVENGLISRVLDGLYMTTISSSKDCMGEAVQNTVEDLKLNTLGR 111
61 MKKIQDCYVENGLISRVLDGLYMTTISSSKDCMGEAVQNTVEDLKLNTLGR 111
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STATE: Massachusetts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 MKKIODCYVENGLISRYLDGLVMTTISSSKDCMGEAVQNTVEDLKLNTLGR 111
61 MKKIODCYVENGLISRYLDGLVMTTISSSKDCMGEAVQNTVEDLKLNTLGR 111
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                                                                                                                                                                                                                                                                                      1 DTMRGALLVIALLVTQALGYKMAETCPIFYDVFFAVANGNELLLDLSLTKVNATEPERTA 60
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                                                                                                                                                                                                                                                                                                                                                                                     Conservative
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ber 2, 1994
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                                                                                                                                                                                                                                                                                                                                                                                                  Score 111; DB 3; 1
Pred. No. 1.1e-102;
                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                          Length 111;
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US-08-430-014-6
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Best Local S
Matches 111
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COMPUTER: ELDPY disk

COMPUTER: ILDRY of COMPATIBLE

COMPUTER: THEM FC COMPATIBLE

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/430,944D

FILING DATE: 28-APR-1995

PRIOR APPLICATION DATA:

APPLICATION UNMER: US 08/430,014

FILING DATE: 27-APR-1995
                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
APPLICANT: GEFTER
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INFORMATION FOR SEQ ID NO: 6:
SEQUENCE CHARACTERISTICS:
LENGTH: 111 amino acids
TYPE: amino acid
ZIP: 02145
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: PC-DOS/MS-DOS
                                                                                                                                                                                                                                          APPLICANT: GEFTER, Malcolm L. et al.
TITLE OF INVENTION: PEPTIDES FOR HUMAN T CELL REACTIVE FELINE
TITLE OF INVENTION: PROTEIN (TRFP)
NUMBER OF SEQUENCES: 101
CORRESPONDENCE ADDRESS:
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TOPOLOGY: linear
MOLECULE TYPE: prot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE/DOCKET NUMBER: IM
TELECOMMUNICATION INFORMATION:
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NAME: Amy E. Mandragouras
REGISTRATION NUMBER: 36,207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE OF INVENTION: A HUMAN T CELL REACTIVE FELINE PROTEIN TITLE OF INVENTION: NUMBER OF SEQUENCES: 103 CORRESPONDENCE ADDRESS: ADDRESSE: LAHLVE & COCKFIELD, LLP STREET: 28 State Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE: 02-SEPT
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                                                                                                                              CITY: WALTHAM
STATE: Massachusetts
COUNTRY: USA
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61 MKKIQDCYVENGLISRVLDGLVMTTISSSKDCMGEAVQNTVEDLKLNTLGR 111
61 MKKIQDCYVENGLISRVLDGLVMTTISSSKDCMGEAVQNTVEDLKLNTLGR 111
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 DTMRGALLVLALLVTQALGVKMAETCPIFYDVFFAVANGNELLLDLSLTKVNATEPERTA 60
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02-SEPT-1994
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%; Score 111; DB 3; Length 111; 100.0%; Pred. No. 1.1e-102; Indels
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CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/430,014

FILING DATE: CLASSIFICATION:

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RESULT 5
US-08-431-184-6
Sequence 6, Application
Sequence 10, 10769
Patent No. 6120769
GENERAL INFORMATION:
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                                                                                          COMPUTER: IBM PC COMPATIBLE

COMPUTER: IBM PC COMPATIBLE

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PatentIn Release #1.0, Version #1.25

SOFTWARE: PatentIn Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/431,184

FILING DATE: 28-APR-1995

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 08/430,014

FILING DATE: 27-APR-1995

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 08/300,928

FILING DATE: US 08/300,928

FILING DATE: US 08/300,928
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                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REGISTRATION NUMBER: 36,207
REFERENCE/DOCKET NUMBER: 00:
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 227-7400
                            ATTORNEY/AGENT INFORMATION:
NAME: AMY E. Mandragouras
REGISTRATION NUMBER: 36,207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATTORNEY/AGENT INFORMATION:
NAME: AMY E. MANDRAGOURAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE CHARACTERISTICS: LENGTH: 111 amino acid
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APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES: 1: CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE OF INVENTION:
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REFERENCE/DOCKET NUMBER: INTELECOMMUNICATION INFORMATION:
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REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                         CITY: Boston
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STREET: 2
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A HUMAN T CELL REACTIVE FELINE PROTEIN
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                    IMI-044DV3
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Pred. No. 1.1e-102;
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INFORMATION FOR SEQ ID NO: 6:
SEQUENCE CHARACTERISTICS:
LENGTH: 111 amino
; MOLECULE TYPE: US-07-807-529A-6
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Best Local Similarity
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                                                                                                    INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Kuo, Mei-c
APPLICANT: MOTVIle, N
TITLE OF INVENTION: F
NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS:
ADDRESSEE: IMMULOGIC PHARMACEUTICAL CORPORATION
STREET: One Kendall Square, Building 600
                                                                                                                                                                                     FILING DATE: 03-NOV-1989
ATTORNEY/AGENT INFORMATION:
NAME: Channing, Stacey L
                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US
FILING DATE: 19911213
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                          OPERATING SYSTEM: PC-D
SOFTWARE: ASCII TEXT
CURRENT APPLICATION DATA:
                                                                                                                  TELECOMMUNICATION INFORMATION: TELEPHONE: (617) 494-0060
                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                SEQUENCE CHARACTERISTICS:
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                                                                                                                                                                                                               APPLICATION NUMBER: US 07/662,276
FILING DATE: 28-FEB-1991
APPLICATION NUMBER: US 07/431,565
FILING DATE: 03-NOV-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STREET: One Kend
CITY: Cambridge
                                                                                                                                                                    NAME: Channing, Stacey L. REGISTRATION NUMBER: 31,0
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                                TOPOLOGY:
                                                              LENGTH:
                                                                                                                                                      REFERENCE/DOCKET NUMBER:
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                                            AMINO ACID
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VENTION: RECOMBITOPE PEPTIDES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   USA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Garman, Richard D.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bond, Julian F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Rogers,
                                                                                                                                                                                                                                                                                                                                                                                             IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 111; DB 3;
Pred. No. 1.1e-102;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0;
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Query Match
Best Local Similarity
Matches 109; Conserv

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RESULT 7
PCT-US93-02462-6

Sequence 6, Application GENERAL INFORMATION:
APPLICANT: Gefter

APPLICANT:

CORRESPONDENCE ADDRESS:

ADDRESSEE:

FITLE OF INVENTION: NUMBER OF SEQUENCES:

STREET: 60 St CITY: Boston STATE: MA

```
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/006,116
FILING DATE: 15-JAN-1993
APPLICATION NUMBER: US 07/884,718
FILING DATE: 15-MAY-1992
APPLICATION NUMBER: US 07/884,718
FILING DATE: 15-MAY-1992
APPLICATION NUMBER: 07/857,311
FILING DATE: 25-MAR-1992
ATTORNEY/AGENT INFORMATION:
NAME: MANDIAGOURAS, ANY E.
REGISTRATION NUMBER: 1FC-031PC
REFERENCE/DOCKET NUMBER: 1FC-031PC
REFERENCE/DOCKET NUMBER: 1FC-031PC
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 227-7400
INFORMATION FOR SEQ ID NO: 6:
SEQUENCE CHARACTERISTICS:
LENGTH: 109 amino acids
TYPE: AMINO ACID
TYPE: AMINO ACID
TYPE: AMINO ACID
TYPE: AMINO ACID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY: USA
ZIP: 02109
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: BM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
COPTWARE: ASCII TEXT
COPTWARE: ASC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: ASCII TEXT
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PC
FILING DATE: 19930325
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61 KIODCYVENGLISRYLJGL/MTTIESSKOCMGEAVQNTVEDLKLNTLGR 109
63 KIQDCYVENGLISRVLDGLVMTTISSSKDCMGEAVQNTVEDLKLNTLGR 111
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                                                                    MRGALLVLALLVTQALGVKMAETCPIFYDVFFAVANGNELLLDLSLTKVNATEPERTAMK 60
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOTVILLE, MALCOLM
NVENTION: PEPTIDES USEFUL FOR TOLERIZATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     E: LAHIVE & COCKFIELD
60 State Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gefter, Malcolm L.
Garman, Richard D.
Greenstein, Julia L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Kuo, Mei-chang
Briner, Thomas J
                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                              protein
                                                                                                                                                                                                 98.2%; Score 109; DB 5; Le
100.0%; Pred. No. 1.1e-100;
htive 0; Mismatches 0;
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100.0%; Pred. No. 1.1e-100;
tive 0; Mismatches 0;
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                                                                                                                                                                                                 Indels
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                                                                                                                                                                                                 0;
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; MOLECULE TYPE:
; FRAGMENT TYPE:
US-08-300-928C-13
                                                                                                                                                                                                                                                                 RESULT 9
US-08-430-944D-13
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATTORNEY/AGENT INFORMATION:
NAME: AMY E. MANDRAGOURAS
REGISTRATION UNUBER: 36,207
REFERENCE/DOCKET NUMBER: 002.
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 227-7400
TELEFAX: (617) 227-5941
INFORMATION FOR SEO ID NO: 13:
SEQUENCE CHARACTERISTICS:
LENGTH: 92 amino acids
TYPE: amino acid
TYPE: amino acid
                          Sequence 13, Application US/08430944D
Patent NO. 6035162
GENURRAL INFORMATION:
APPLICANT: Bruce L. Rogers et al.
TITLE OF INVENTION: A HUMAN T CELL REACTIVE FELINE PROTEIN
TITLE OF INVENTION:
NUMBER OF SEQUENCES: 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 82.9
Best Local Similarity 100.
Matches 92; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ASCII text
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/300,928
FILING DATE: September 2, 1994
CLASSIFICATION: 435
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/807,529
FILING DATE: December 13, 1991
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: GEFTER, Malcolm L. et al.
TITLE OF INVENTION: PEPTIDES FOR HUMAN T CELL REACTIVE FELINE
TITLE OF INVENTION: PROTEIN (TRFP)
NUMBER OF SEQUENCES: 101
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                          20 VKMAETCPIFYDVFFAVANGNELLLDLSLTKVNATEPERTAMKKIODCYVENGLISRVLD 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE: IMMULOGIC PHARMACEUTICAL CORPORATION STREET: 610 LINCOLN STREET CITY: WALTHAM STATE: Massachusetts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CLASSIFICATION: 435
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internal
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September 2, 1994
: 435
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100.0%; Pred. No. 6.1e-84;
tive 0; Mismatches 0;
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; MOLECULE TYPE: PCT-US93-02462-6

TOPOLOGY:

Query Match
Best Local Similarity
Matches 109; Conserva

STREET: 28 St CITY: Boston

28 State Street

LAHIVE & COCKFIELD,

Massachusetts

USA

ADDRESSEE:

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RESULT 10
US-08-430-014-13
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                                                                                                                                                                                                                                                                                                              Patent No. 6048962
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                       Sequence 13, Application US/08430014 Patent No. 6048962
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US/08/4.

FILLING DATE: 28 APR-1995
PRIOR APPLICATION DATA:
APPLICATION UMBER: US 08/4
FILLING DATE: 77 APR-1995
PRIOR APPLICATION DATA:
BAPPLICATION UMBER: US 08/3.
APPLICATION NUMBER: 36,207
REGISTRATION NUMBER: 36,207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEFAX: (617)742-4214
INFORMATION FOR SEQ ID NO: 13:
SEQUENCE CHARACTERISTICS:
LENGTH: 92 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE/DOCKET NUMBER: IMI-044DV2
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617)227-7400
              COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: ASCII text CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version
CURRENT APPLICATION DATA:
                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                           NUMBER OF SEQUENCES: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                  TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MOLECULE TYPE: peptide FRAGMENT TYPE: internal
                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   08
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: amino acid
 APPLICATION NUMBER:
                                                                                                                                          COUNTRY:
                                                                                                                                                             STATE:
                                                                                                                                                                                            STREET:
                                                                                                                                                                                                           ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY:
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                                                                                                                         02145
                                                                                                                                                                             WALTHAM
                                                                                                                                                         Massachusetts
                                                                                                                                                                                        E: IMMULOGIC PHARMACEUTICAL CORPORATION 610 LINCOLN STREET
                                                                                                                                                                                                                                                         GEFTER, Malcolm L. et al.

VENTION: PEPTIDES FOR HUMAN T CELL REACTIVE FELINE

VENTION: PROTEIN (TRPP)
                                                                                                                                          USA
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US/08/430,014
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NAME: AMY E. MANDRAGOURAS
REGISTRATION NUMBER: 36,207
REFERENCE/DOCKET NUMBER: 002.
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 227-7400
TELEPAX: (617) 227-5941
INFORMATION FOR SEQ. ID NO: 13:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 13, Application US/08431184 Patent No. 6120769
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APPLICATION NUMBER: US 08/430,014
FILING DATE: 27-APR-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/300,928
FILING DATE: 02-SEPT-1994
ATTORNEY/AGENT INFORMATION:
NAME: AMY E. Mandragouras
REGISTRATION NUMBER: 36,207
REFERENCE/DOCKET NUMBER: IMI-044DV3
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
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                                                                                                                                                                                                                   CURRENT APPLICATION DATA:
APPLICATION NUMBER: US,
                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Bruce L. Rogers et al.
TITLE OF INVENTION: A HUMAN T CELL REACTIVE FELINE PROTEIN
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE CHARACTERISTICS:
LENGTH: 92 amino acids
TYPE: amino acid
                                                                                                                                                                              FILING DATE: 28-APR-PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                   MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE:
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 GLYMTTISSSKDCMGEAVQNTVEDLKLNTLGR 92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: FILING DATE:
                                                                                                                                                                                                                                                                                                                                                   COUNTRY: U
ZIP: 02109
                                                                                                                                                                                                                                                                                                                                                                                                     CITY: Boston
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                   STATE: Massachusetts
                                                                                                                                                                                                                                                                                                                                                                                                                      STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                      E: LAHIVE & COCKFIELD, 28 State Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
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internal
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                             103
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100.0%; Pred. No.
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RESULT 12
US-07-662-193-5
; Sequence 5, Ap
; Patent No. 532
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; FRAGMENT TYPE: internal
US-08-431-184-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Kuo, Mei-chang
APPLICANT: Kuo, Mei-chang
APPLICANT: Bond, Julian
TITLE OF INVENTION: Improved Preparation
TITLE OF INVENTION: Allergens for Immur
TITLE OF INVENTION: Allergens for Immur
NUMBER OF SEQUENCES: 8
CORRESPONDENCE ADDRESS:
CARDESSER: LAHIVE & COCKFIELD
STREET: 60 State Street, Suite 510
                  Query Match 74.8%;
Best Local Similarity 100.0%;
Matches 83; Conservative (
                                                                                                                                                                                REGISTRATION NUMBER: P36,207
REFERENCE/DOCKET NUMBER: MAKE
TELECOMMUNICATION INFORMATION
TELEPHONE: (617) 227-7400
INFORMATION FOR SEO ID NO: 5:
SEQUENCE CHARACTERISTICS:
LENGTH: 109 amino acids
TYPE: AMINO ACID
TODOTORY.
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Best Local Similarity 100.0%;
Matches 92; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: 1BM PC compatible
COMPUTER: 1BM PC compatible
COMPUTER: 1BM PC COMPATION
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION MUMBER: US/07/862,193
FILING DATE: 19310228
CLASSIFICATION: 514
                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/662,276
FILING DATE: 28-FEB-1991
ATTORNEY/AGENT INFORMATION:
                                                                                                                   MOLECULE TYPE: peptide FRAGMENT TYPE: internal -662-193-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STREET: 60 St
CITY: Boston
STATE: MA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20 VKMAETCPIFYDVFRAVANGNELLLDLSLTKVNATEPERTANKKIQDCYVENGLISRVLD 79
1 VKMAETCPIFYDVFRAVANGNELLLDLSLTKVNATEPERTANKKIQDCYVENGLISRVLD 60
1 VKMAETCPIFYDVFRAVANGNELLLDLSLTKVNATEPERTANKKIQDCYVENGLISRVLD 60
                                                                                                                                                                       TOPOLOGY:
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                    Score 83; DB 1; Lo
pred. No. 5.8e-75;
Mismatches 0;
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                    0;
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US-08-300-928C-8
; Sequence 8, Application US/08300928C
; Serient No. 6019972
parent No. 777770N:
                                                                        US-08-430-944D-8
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INFORMATION FOR SEQ ID NO: 8:
SEQUENCE CHARACTERISTICS:
LENGTH: 109 amino acids
TYPE: amino acid
TOPOLOGY: linear
Sequence 8, Application US/08430944D Patent No. 6025162
GENERAL INFORMATION:
APPLICANT: Bruce L. Rogers et al.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 8, Applicati
Patent No. 6019972
GENERAL INFORMATION:
APPLICANT: GEFTER
                                                                                                                                                                                                                                                                                                   Query Match 74.8%; Score 83; Best Local Similarity 100.0%; Pred. No. Matches 83; Conservative 0; Mismatc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: AMY E. MANDRAGOURAS
REGISTRATION NUMBER: 36,207
REFERENCE/DOCKET NUMBER: 002.
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 227-7400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US/08/300,9
FILING DATE: September 2, 1994
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/807,529
FILING DATE: December 13, 1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION DATA:
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CORRESPONDENCE ADDRESS:
ADDRESSEE: IMMULGGIC PHARMACEUTICAL CORPORATION
STREET: 610 LINCOLN STREET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: GEFTER, MAICOIM L. et al.
TITLE OF INVENTION: PEPTIDES FOR HUMAN T CELL REACTIVE FELINE
TITLE OF INVENTION: PROTEIN (TRFP)
                                                                                                                                                61 MKKIQDCYVENGLISRVLDGLVM 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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ber 2, 1994
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CORRESPONDENCE ADDRESS:
ADDRESSEE: LAHIVE & COCKFIELD,

STREET:

28 State Street

Boston

TITLE OF INVENTION:

A HUMAN T CELL REACTIVE FELINE PROTEIN

NUMBER OF SEQUENCES:

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; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-430-944D-8
                                                                                                                                                                                                                                                                                                   US-08-430-014-8
                                                                                                                                                                                                    Sequence 8, Application US/08430014
Patent No. 6048962
GENERAL INFORMATION:
APPLICANT: GETTER, Malcolm L. e
TITLE OF INVENTION: PROTEIN (TR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
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TELEFAX: (617)742-4214
INFORMATION FOR SEQ ID NO: 8:
SEQUENCE CHARACTERISTICS:
LENGTH: 109 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US/08/430,944D FILING DATE: 28-APR-1995 PRIOR APPLICATION DATA: APPLICATION NUMBER: US 08/430,014 FILING DATE: 27-APR-1995
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: PatentIn Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
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MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATTORNEY/AGENT INFORMATION:
NAME: Amy E. Mandragouras
REGISTRATION NUMBER: 36,2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08,
FILING DATE: 02-SEPT-1994
                                                                                                                                CORRESPONDENCE ADDRESS:
ADDRESSEE: IMMULOGIC PHARMACEUTICAL CORPORATION
STREET: 610 LINCOLN STREET
                                                                                                                                                                                      NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE/DOCKET NUMBER: 1M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                     STREET: 610 L
CITY: WALTHAM
                                                                                                                                                                                                                                                                                                                                                                 COUNTRY:
                                                                                     COUNTRY:
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                                                                       02145
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                                                                                                        Massachusetts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                    GEFTER, Malcolm L. et al.
VENTION: PEPTIDES FOR HUMAN T CELL REACTIVE FELINE
VENTION: PROTEIN (TRFP)
EQUENCES: 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                USA
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100.0%; Pr
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. 5.8e-75;
ches 0;
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                                                                                                                                             Query Match 74.8%; Score 83; DB Best Local Similarity 100.0%; Pred. No. 5.8 Matches 83; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                           TELEPHONE: (617) 227-7400
TELEFAX: (617) 227-5941
INFORMATION FOR SEQ ID NO: 8:
                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATTORNEY/AGENT INFORMATION:
NAME: AMY E. MANDRAGOURAS
REGISTRATION NUMBER: 36, 21
                                                                                                                                                                                                                                                                                                                                                                                                                  TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION DATA:
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                                                                                                                                                                                                                                                                                                                                       SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                      TYPE: a
                                                                                                                                                                                                                                                                                                                                                                                                                                      REGISTRATION NUMBER: 36,207
REFERENCE/DOCKET NUMBER: 002.6US(IMI-044)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: FILING DATE:
61 MKKIQDCYVENGLISRVLDGLVM 83
                   61 MKKIQDCYVENGLISRVLDGLVM 83
                                                                                                                                                                                                                                                                                  TOPOLOGY:
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                                                                                            1 DTMRGALLVLALLVTQALGVKMAETCPIFYDVFFAVANGNELLLDLSLTKVNATEPERTA 60
                                                                          DTMRGALLVLALLVTQALGVKMAETCPIFYDVFFAVANGNELLLDLSLTKVNATEPERTA 60
                                                                                                                                                                                                                                                                                  1: 109 amino acids amino acid amino acid
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                                                                                                                                                                                      Length 109;
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Search completed: May 7, 2002, 12:17:53 Job time: 109 sec

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Result
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Perfect score:
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Maximum DB
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     Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
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Copyright (c) 1993 - 2000 Compugen Ltd
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sp_unclassified:*
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sp_rodent:*
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318
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Q9AEX7-
Q9AEX5
Q9HT26
Q61029
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Q9X039
Q61023
Q9XG69
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Q9XG69
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Q9y5y7 homo sapien
Q9unf4 homo sapien
Q9unf4 homo sapien
Q9aex7 treponema h
Q9aex5 treponema h
Q9ht26 pseudomonas
Q61029 trypanosoma
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Q9psw3 petromyzon
Q9psw2 petromyzon
Q87052 vibrio chol
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Submitted (CCT-1998) to the EMBL/GenBank/DDBJ databases.
EMBL; AF097759; AAC97500.1; -
EMBL; AF097758; AAC97500.1; JOINED.
EMBL; AF097757; AAC97498.1; -
EMBL; AF097757; AAC97498.1; -
EMBL; AF097756; AAC97498.1; -
EMBL; AF097756; AAC97498.1; JOINED.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Characterization of lamprin, an unusual matrix protein from lamprey cartilage. Implications for evolution, structure, and assembly of elastin and other fibrillar proteins.";
J. Biol. Chem. 268:1440-1447(1993).
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MEDLINE-93133269; PubMed-7678258;
Robson P., Wright G.M., Sitarz E., Maiti A., Rawat M., Youson J.H.,
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Petromyzontiformes; Petromyzontidae; Petromyzon.
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SEQUENCE FROM N.A.

MEDLINE=93123269; PubMed=7678258;

ROBSON P., Wright G.M., Sitarz E., Maiti A., Rawat M., Youson J.H.,

Robson P., Wright G.M., Sitarz E., Maiti A., Rawat M., Youson J.H.,

Keeley F.W.;

"Characterization of lamprin, an unusual matrix protein from lamprey

cartilage. Implications for evolution, structure, and assembly of

elastin and other fibrillar proteins.";

J. Biol. Chem. 268:1440-1447(1993).
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ROBSON J.H., Keeley F.W.;

ROBSON J.H., Keeley F.W.;

Submitted (OCT-1998) to the EMBL/GenBank/DDBJ databases.

BMBL; AF097757; AAC97499.1;

EMBL; AF097756; AAC97499.1;

EMBL; AF097756; AAC97499.1;

EMBL; AF097756 AAC97499.1;

EMBL; AF097756 AAC97499.1;

SEQUENCE 138 AA; 13094 MM; AB2F35D0D25D7580 CRC64;
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Hyperoartia;
Petromyzontiformes; Petromyzontidae; Petromyzon.
NCBI_TaxID-7757;
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MEDLINE-93123269; PubMed-7678258;

MEDLINE-93123269; PubMed-7678258;

Robson P., Wright G.M., Sitarz E., Maiti A., Rawat M., Youson J.H.,

Robson P. Wright G.M., Sitarz E., Maiti A., Rawat M., Youson J.H.,

Keeley F.W.;

"Characterization of lamprin, an unusual matrix protein from lamprey

Cartilage. Implications for evolution, structure, and assembly of

elastin and other fibrillar proteins.";

J., Biol. Chem. 268:1440-1447(1993).
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Hyperoartia;
Petromyzontiformes; Petromyzontidae; Petromyzon.
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Fallarino A.;
Submitted (JUL-1998) to the El
EMEL; AJ231108; CAA13150.1; -
InterPro; IPR003764; NagA.
Pfam; PF02612; NagA; 1.
NON_TER 11
NON_TER 181
SEQUENCE 181 AA; 19476 MW;
                                                                                                                                                                                                        Q9KW39 PRELIMINARY; PK1, 2006W39, Q9KW39, Q9KW39, Q1-OCT-2000 (TrembLrel. 15, Created) Q1-OCT-2000 (TrembLrel. 15, Last sequence update) Q1-OCT-2000 (TrembLrel. 15, Last annotation update) COMPONENT OF TYPE IV SECRETION SYSTEM.
                                                                                       SEQUENCE FROM N.A.
STRAIN=WKUEYO;
MASHI S.;
"Vir genes for the type IV secretion system of Wolbachia wKueYO.";
"Vir genes for the type IV secretion system of Wolbachia wKueYO.";
Submitted (JUN-2000) to the EMBL/GenBank/DDBJ databases.
EMBLF, AB045235; BAA97440.1;
EMBLF, AB045235; BAA97440.1;
23C42E77A756B5E2 CRC64;
                                                                                                                                                                                Wolbachia sp. wKueYO,
Bacteria; Proteobacteria; alpha subdivision;
Rickettslaceae; Wolbachieae; Wolbachia.
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01-NOV-1998 (TrEMBLrel.
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248F PROTEIN (FRAGMENT)
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Bacteria; Proteobacteria;
NCBI_TaxID=666;
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SIGNAL
                                                                                                                          "LYVE-1, a new homologue of the CD44 receptor for hypaturonan.";
J. Cell Biol. 144:789-801(1999).
EMBL; AF118108; AAD42764.1; -.
HSSP; P98066; 1TSG.
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SEQUENCE
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Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-JUN-2001 (TrEMBLrel. 17, Cr
01-JUN-2001 (TrEMBLrel. 17, La
01-JUN-2001 (TrEMBLrel. 17, La
01-JUN-2001 (TrEMBLrel. 17, La
                                                                                                                                                                                                                                 MEDLINE=99156989;
Banerji S., Ni J.,
Jackson D.G.;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "LYVE-1, a new homologue of the CD44 glycoprotein is a lymph-specific receptor for hyaluronan. LYVE-1, a new homologue of the CD44 glycoprotein is a lymph-specific receptor for hyaluronan."; J. Cell Biol. 144:789-801(1999).
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01-JUN-2001
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                                        InterPro; IPR000538; Link. Pfam; PF00193; Xlink; 1. ProDom; PD000918; Link; 1. SMART; SM00445; LINK; 1.
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Mammalia; Eutheria;
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01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
LYMPHATIC ENDOTHELIUM-SPECIFIC HYALURONAN RECEPTOR LYVE-1.
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J. Biol. Chem. 0:0-0(0)
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                                                                                                                                                                                                                                                                                                    SEQUENCE FROM
                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens (Human)
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89; PubMed=10037799;
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, Wang S.X., Clasper
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Pred. No. 8.1;
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Sciurognathi; Muridae;
  OEBEA56729CEFFF7 CRC64;
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01-UUn-2001 (TrEMBLrel. 17
01-JUN-2001 (TrEMBLrel. 17
01-JUN-2001 (TrEMBLrel. 17
VARIABLE SURFACE PROTEIN V
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "HAR: a novel homolog of CD44 and putative hyaluronic acid encoded by a gene on human chromosome 11p15."; Submitted (OCT-1999) to the EMBL/GenBank/DDBJ databases. EMBL; AF127670; AAD49220.2; -. HSSP; P98066; 1TSG.
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01-MAY-2000
01-MAR-2001
01-JUN-2001
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SEQUENCE
McCaman M., Gabe J.;
"Serpulina hyodysenteriae (B204) contains eigla 39 kDa surface protein.";
Submitted (FEB-2001) to the EMBL/GenBank/DDBJ EMBL; AY027775; AAK14801.1;
SEQUENCE 390 AA; 42836 MW; 9B20084CE61A2B
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Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
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                                                                                                          SEQUENCE FROM N.A. MCCaman M., Gabe J.;
                                                                                                                                                                         NCBI_TaxID=159;
                                                                                                                                                                                                                    Treponema
                                                                                                                                                                                                                                             VSPF
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Spirochaetales;
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17, Last sequence update)
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Pred. No. 8.1
0; Mismatches
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  9B20084CE61A2B9E
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                                         MEDLINE-20437337; PubMed=10984043;

RS Stover C.K., Pham X.-Q.T., Erwin A.L., Mizoguchi S.D., Warrener P.,

RA Hickey M.J., Brinkman F.S.L., Hufnagle W.O., Kowalik D.J., Lagrou M.,

RA Garber R.L., Goltry L., Tolentino E., Westbrock-Wadman S., Yuan Y.,

RA Brody L.L., Coulter S.N., Folger K.R., Kas A., Larbig K., Lim R.M.,

RA Smith K.A., Spencer D.H., Wong G.K.-S., Wu Z., Paulsen I.T.,

RA Smith K.A., Spencer D.H., Wong G.K.-S., Wu Z., Paulsen I.T.,

RA Smith K.A., Spencer D.H., Wong G.K.-S., Wu Z., Paulsen I.T.,

RA Smith K.A., Spencer D.H., Wong G.K.-S., Wu Z., Paulsen I.T.,

RA Smith K.A., Spencer D.H., Wong G.K.-S., Wu Z., Paulsen I.T.,

RA Smith K.A., Spencer D.H., Wong G.K.-S., Wu Z., Paulsen I.T.,

RA Smith K.A., Spencer D.H., Wong G.K.-S., Wu Z., Paulsen I.T.,

RO Complete genome sequence of Pseudomonas aeruginosa PAO1, an

Nature 406:959-964 (2000).

RA REDETET J. PRO1035; TCRTETA.

RINTS; PRO1035; TCRTETA.

PRINTS; PRO1035; TCRTETB.

RO COMPLETE PRO1035; TCRTETB.

COMPLETE PRO1035; TCRTETB.

COMPLETE PRO1035; TCRTETB.

RO SEQUENCE 401 AA; 42247 MW; D8D9EEABDABD509E CRC64;
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01-MAR-2001 (Tremblrel 16, 1
01-MAR-2001 (Tremblrel 17, 1
PROBABLE MFS TRANSPORTER.
PA5548
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QSAEX5, PRELIMINARY;
QSAEX5, CreamBirel 17, CreamBirel 17, Cast
Q1-JUN-2001 (TrEMBirel 17, Last
Q1-JUN-2001 (TrEMBirel 17, Last
VARIABLE SURFACE PROTEIN VSPH.
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MCCaman M., Gabe J.;

"Serpulina hyodysenteriae (B204) contains eight gene copies
a 39 kDa surface protein.";

Submitted (FBB-2001) to the EMBL/GenBank/DDBJ databases.

EMBL; AY027775; AAK14803.1;

EMBL; AY027775; AAK14803.1;

SEQUENCE 390 AA; 42816 MW; C3B63F5C9BC36E08 CRC64;
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NCBI_TaxID=287;
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Bacteria; Proteobacteria;
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Bacteria; Spirochaetales; Brachyspiraceae; Brachyspira.
NCBI_TaxID=159;
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STRAIN-CL-BRENNER;
DI NOÎA J.M., D'Orso I., Aslund L.
J. Biol. Chem. 0:0-0(1998).
EMBL; ARO36439; AAC14242.1; -.
NON_TER 64 64
SEQUENCE 64 AA; 6673 MW; A2B5;
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Score 7; DB 5; Pred. No. 21; 0; Mismatches

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A2B55BB7D05608FF

CRC64;

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A.C.C.;

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SEQUENCE FROM N.A.
STRAIN-CL-BRENNER;
DI NOLA J.M., D'OTSO I., ASIL
CNOLA J.M., D'OTSO I., ASIL
CNOLA J.M.,                                                                                                                   01-AUG-1998 (TYEMBLYEL 07, CY
01-AUG-1998 (TYEMBLYEL 07, La
01-AUG-1998 (TYEMBLYEL 07, La
MUCIN-LIKE PROTEIN (FRAGMENT).
Trypanosoma cruzi.
Eukaryota; Euglenozoa; Kinetoplastida; RCBI_TaxID=5693;
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O61029;
01-AUG-1998 (TrEMBLrel. 07, Created)
01-AUG-1998 (TrEMBLrel. 07, Last seq
01-AUG-1998 (TrEMBLrel. 07, Last ann
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Eukaryota; Euglenozoa; Kinetoplastida;
NCBI_TaxID=5693;
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EMUCE-21E22BIS.
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SEQUENCE
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SEQUENCE FROM N.A.

MEDLINE-94150718; Pubmed-7906398;

Wilson R., Ainscough R., Anderson K., Baynes C., Berks M.,

Wilson R., Ainscough R., Connell M., Copsey T., Cooper J., Coulson A.,

Bonfield J., Burton J., Connell M., Copsey T., Cooper J., Coulson A.,

Caraton M., Dear S., Du Z., Durbin R., Favello A., Fulton L.,

Cardner A., Green P., Hawkins T., Hillier L., Jier M., Johnston L.,

Jones M., Kershaw J., Kirsten J., Laister N., Latreille P.,

Jones M., Kershaw J., Kirsten J., Laister N., Latreille P.,

Lightning J., Lloyd C., Mcmurray A., Mortimore B., O'Callaghan M.,

Parsons J., Percy C., Rifken L., Roopra A., Saunders D., Shownkeen R.,

Smaldon N., Smith A., Sonnhammer E., Staden R., Sulston J.,

Thierry-Mieg J., Thomas K., Vaudin M., Waterston R.,

Watson A., Weinstock L., Wilkinson-Sproat J., Wohldman P.;

"2.2 M of contiguous nucleotide sequence from chromosome III of C.
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Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Rhabditoidea; Rhabditidae; Peloderinae; Caenorhabditis.
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SEQUENCE
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01-AUG-1998 (TrEMBLrel. 07,
01-AUG-1998 (TrEMBLrel. 07,
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Q9XU39;

O1-NOV-1999 (TrEMBLrel. 12,

O1-NOV-1999 (TrEMBLrel. 12,

O1-NOV-1999 (TrEMBLrel. 12,
                                                                                                                                                                                                                             STRAIN-CL-BRENNER;
D1 No1a J.M., D'Orso I., Aslunc
J. Biol. Chem. 0:0-0(1998).
EMBL; AF036411; AAC14222.1; -.
NON_TER 74
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Lloyd C.;
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Eukaryota; Euglenozoa; Kinetoplastida;
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EMBL; Z92782; CABO7183.1; -.
SEQUENCE 73 AA; 7210 MW;
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5 LLVLALL 11
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Db 14 ALLVLAL 20

Search completed: May 7, 2002, 12:20:52 Job time: 193 sec

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Title:
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                                                                                                                                                                                                            OM protein - protein search, using sw model
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111
1 DTMRGALLVLALLVTQALGV.....CMGEAVQNTVEDLKLNTLGR 111
                                                                                                                                                                                                                                                                     GenCore version 4.5 Copyright (c) 1993 - 2000 Compugen Ltd.
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Word sizė : Searched: 0 100059 seqs, 36664827 residues

Total number of hits satisfying chosen parameters:

100059

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Listing first 45 summaries

Database : SwissProt\_39:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

### SUMMARIES

33210 33210	22 22 23 24 25 26	100 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Result No.
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VE6_COPV	Y070_TREPA	CHMU_BACSU	RNP_SPAEH	YBAV_ECOLI	CHH4_PENMO	MERT_SHEPU	DCHS_LACBU	INS_BRARE	KACA_RAT	VNST_MAGV	VNST_BUNYW
Q89808 canine oral	083109 treponema p	P19080 bacillus su	P16414 spalax leuc	P77415 escherichia	097386 penaeus mon	Q54462 shewanella	P04193 lactobacill		٠,	P16605 maguari vir	P16494 bunyamwera

# ALIGNMENTS

CCCCCCCCCCCRRRRRRRRRRRRRRRRRRRRRRRRRRR	RECULTIFICATION OF THE COLOR OF
MEDLINE-92241678; PubMed-1572548; Griffith I.J., Craig S., Pollock J., Yu XB., Morgenstern J.P., Rogers B.L.; "Expression and genomic structure of the genes encoding FdI, the major allergen from the domestic cat."; Gene 113:263-268(1992).  SEQUENCE OF 18-37, AND CHARACTERIZATION. MEDLINE-91287714; PubMed-1712068; Duffort O.A., Carreira J., Nitti G., Polo F., Lombardero M.; "Studies on the biochemical structure of the major cat allergen Felis Mol. Immunol. 28:301-309(1991).  (4) MCHARACTERIZATION. MEDLINE-84265679; PubMed-6747135; Leiterman K., Ohman J.L. Jr.; "Cat allergen 1: Biochemical, antigenic, and allergenic properties."; J. Allergy Clin. Immunol. 74:147-133(1984).  -!- SUBUNIT: HETEROTETRAMER COMPOSED OF TWO NON-COVALENTLY LINKED DISULFIDE-LINKED HETERODIMER OF CHAINS 1 AND 7: -!- SUBUNIT: HETEROTETRAMER COMPOSED OF TWO NON-COVALENTLY LINKED DISULFIDE-LINKED HETERODIMER OF CHAINS 1 AND 7: -!- ALIERNATIVE SPLICING OR MAY REPRESENT DIFFERENT ALLELES OF THE CH2 GENE. THE SEQUENCE SHOWN HERE IS THAT OF THE LONG FORM (CH2L)!- TISSUE SPECIFICITY: THE LONG FORM IS PREFERENTIALLY EXPRESSED IN THE SKIN!- DISEASSED IN THE SKIN!- DISEASSED IN THE SKIN!- DISEASSE MAJOR ALLERGEN PRODUCED BY THE DOMESTIC CAT	LT 1 FELCA FELCA STANDARD; PRT; 109 AA. P30440; 01-APR-1993 (Rel. 25, Created) 01-APR-1993 (Rel. 25, Last sequence update) 15-JUL-1998 (Rel. 36, Last sequence update) 15-JUL-1998 (Rel. 36, Last annotation update) MAJOR ALLERGEN I POLYPEPTIDE CHAIN 2 PRECURSOR (ALLERGEN FEL D 1-B) (FEL D 1-B) (ALLERGEN CAT-1) (AG4) (FDI). Felis silvestris catus (Cat). Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Butheria; Carnivora; Fissipedia; Felidae; Felis. NCBI_TaxID=9685; [1] SEQUENCE FROM N.A., AND SEQUENCE OF 18-100. MEDLINE=92052157; PubMed=1946388; Morgenstern J.P., Griffith I.J., Brauer A.W., Rogers B.L., Bond J.F., Chapman M.D., Kuo MC.; "Amino acid sequence of Fel dI, the major allergen of the domestic cat: protein sequence analysis and cDNA cloning."; Proc. Natl. Acad. Sci. U.S.A. 88:9690-9694(1991). SEQUENCE FROM N.A.

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Query Match
Best Local S
Matches 109
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PIR; JC1127; JC1127
PIR; JC1145; JC1145.
Allergen; Glycoprotes
SIGNAL
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CARBOHYD
VARSPLIC
VARSPLIC
  "Characterization of lamprin, an unusual matrix protein from lamprey cartilage. Implications for evolution, structure, and assembly of elastin and other fibrillar proteins.";

J. Biol. Chem. 268:1447(1993).

-i- FUNCTION: SELF-AGGREGATING PROTEIN THAT MAKES PART OF THE SOLUBLIFORM OF LAMPRIN LAMPRIN CHAINS SELF-AGGREGATE TO FORM
-FUBERS AND HAVE SECONDARY STRUCTURES PARTICULARLY RICH IN BETA-TURNS.
                                                                                                                                                                                                                                                                                                         Petromyzontiformes; Petromyzontidae; Petromyzon.
NCbl_TaxID=7757;
                                                                                                                                                                                                                                                                                                                                                                                               LAMP_PETMA STANDARD; PRT; 139 AA.

P33575; P33576; Created)
01-FEB-1994 (Rel. 28, Created)
01-FEB-1994 (Rel. 28, Last sequence update)
30-MAY-2000 (Rel. 39, Last anotation update)
LAMPRIN 0.9 PRECURSOR (CARTILAGE MATRIX PROTEIN).
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EMBL; X62478; CAA44345.1;
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G.M., Sitarz E., Maiti A., Rawat M., Youson J.H.,
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N-LINKED (GLCNAC. . .).

T -> PSTINIAWYKOFRPY (IN ISOFORM CH2ST).

I -> L (IN CH2LV).

I -> V (IN CH2SV).

I -> V (IN CH2SV).

F -> N (IN CH2S AND CH2SV).

S -> L (IN CH2S AND CH2SV).

S -> V (IN CH2S AND CH2SV).

S -> V (IN CH2S).

S -> V (IN CH2S).

N-S (IN CH2S).

S -> V (IN CH2S).

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O -> E (IN CH2S).

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O -> E (IN CH2SV).

N -> K (IN CH2SV).
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    Eukaryotism and Symbiosis, pp.40-48, (1997).
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20-AUG-2001
SEQUENCE FROM N.A.
STRAIN-LB555 / PRINGSHEIM;
LOEffelhardt W., Stirewalt V.L., Michalowski C.B., Annarella M.,
Loeffelhardt W., Schluchter W.M., Chung S., Newmann-Spallart C.,
Farley J.Y., Schluchter W.M., Chung S., Newmann-Spallart C.,
Steiner J.M., Jakowitsch J., Bohnert H.J., Bryant D.A.;
"The complete sequence of the cyanelle genome of Cyanophora para
the genetic complexity of a primitive plastid.";
(In) Schenk H.E.A., Herrmann R., Jeon K.W., Mueller N.E.,
Schwemmler W. (eds.);
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STRAIN-LB555 / PRINGSHEIM;
STIREWALL V.L., Michalowski C.B.,
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                                                                                                                                                                   "Nucleotide sequence of the cyanelle DN Plant Mol. Biol. Rep. 13:327-332(1995).
                                                                                                                                                                                                                                                                                    Eukaryota; Glaucocystophyceae;
NCBI_TaxID=2762;
                                                                                                                                                                                                                                                                                                                                        Cyanophora paradoxa.
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EMBL; L05924; AAA49268.1;
PIR; C45051; C45051.
PIR; A45051; A45051.
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                                          This
                                                                        "Molecular basis of symbiosis between Rhizobium and legumes.";
Nature 387:394-401(1997).
-i- FUNCTION: POSSIBLE CATION TRANSPORTER.
-i- SUBCELLULAR LOCATION: INTEGRAL MEMBRANE PROTEIN (POTENTIAL).
-i- SIMILARITY: STRONG, TO E.COLI CALCIUM/PROTON ANTIPORTER (CHAA).
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MEDLINE=92201692; PubMed=1551590;
Rhiel E., Stirewalt V.L., Gasparich G.E., Bryant
"The psac genes of Synechococcus sp. PCC7002 and
                                                                                                                                                                                                       Freiberg C.A., Fellay
                                                                                                                                                                                                                           SEQUENCE FROM N.A.
MEDLINE=97305956; PubMed=9163424;
                                                                                                                                                                                                                                                                                                                               Plasmid sym pNGR234a.
Bacteria; Proteobacteria;
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SIMILARITY: BELONGS TO THE ABC-3 SUBFAMILY OF INTEGRAL MEMBRANE
SWISS-PROT entry is copyright. It is produced through a collaboration een the Swiss Institute of Bioinformatics and the EMBL outstation - European Bioinformatics Institute. There are no restrictions on its
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STRAIN-NON-O1 / 1148A;
MEDLINE-97446530; PubMed-9301118;
Yamano N., Oura N., Wang J., Fujishima S.;
"Cloning and sequencing of the genes for N."
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                                                                                                                                                                                                    MEDLINE=20406833; PubMed=10952301;
Heidelberg J.F., Elsen J.A., Nelson W.C., Clayton R.A., Gwinn M.L.,
Dodson R.J., Haft D.H., Hickey E.K., Peterson J.D., Umayam L.A.,
Gill S.R., Nelson K.E., Read T.D., Tettelin H., Richardson D.,
Ermolaeva M.D., Vamathevan J., Bass S., Qin H., Dragoi I., Sellers P.,
McDonald L., Utterback T., Fleishmann R.D., Nierman W.C., White O.,
Salzberg S.L., Smith H.O., Colwell R.R., Mekalanos J.J., Venter J.C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     15-JUL-1998 (Rel. 36, Created)
20-AUG-2001 (Rel. 40, Last sequence update)
20-AUG-2001 (Rel. 40, Last annotation updat
N-ACETYLGLUCOSAMINE-6-PHOSPHATE DEACETYLASE
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                                                                                                      Nature 406:477-483(2000).
                                                                                                                                                                                                                                                                                                                                                         STRAIN=EL TOR N16961 / SEROTYPE
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                                                             = D-GLUCOSAMINE 6-PHOSPHATE + ACETATE.
-!- PATHWAY: N-ACETYL GLUCOSAMINE UTILIZATION PATHWAY
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"Synaptic integrins in developing, adult, and mutant muscle: selective association of alphal, alpha7A, and alpha7B integrins with the association of alphal, alpha7A, and alpha7B integrins with the recommendation of alphal, alpha7A, and alpha7B integrins with the recommendation of alphal, alpha/7, and alpha7B integrins with the receptor of covered to the strength of the primary laminin receptor of the freeentarion, if may induce changes in the shape and mobility of problasts, and facilitate their localization at the maintenance of the myofibers cytoarchitecture as well as for their anchorage, of the myofibers cytoarchitecture as well as for their anchorage, of the myofibers cytoarchitecture as well as for their anchorage, of the myofibers cytoarchitecture as well as for their anchorage, or subunit: heterodimer of an alpha and a beta subunit. The alpha color of subunit is composed of an heavy and a light chain linked by a
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InterPro; IPR003764; NagA. |
Pfam; pF02612; NagA; 1.
Hydrolase; Carbohydrate metabolism; Complete proteome.
CONFLICT 79 79 79 T -> I (IN REF. 1).
CONFLICT 79 379 AA: 40956 MW; 34906344A3F92A0F CRC64;
                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A. (ISOFORMS ALPHA-7X1A AND ALPHA-7X1C).
TISSUB-Skeletal muscle;
MEDLINE-94711924; PubMed-8126096;
MEDLINE-94711924; PubMed-8126096;
Song W.K., Wang W., Sato H., Bielser D.A., Kaufman S.J.;
Song W.K., Wang W., Sato H., Bielser D.A., Kaufman S.J.;
"Expression of alpha 7 integrin cytoplasmic domains during skeletal muscle development: alternate forms, conformational change, and homologies with serine/threonine kinases and tyrosine phosphatases.";
J. Cell Sci. 106:1139-1152(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Song W.K., Wang W., Foster R.F., Bielser D.A., Kaufman S.J.; "H36-alpha 7 is a novel integrin alpha chain that is developmentally regulated during skeletal myogenesis."; J. Cell Biol. 117:643-657(1992).
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Eukaryota; Metazoa; Chordata;
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DISULFIDE BOND. ALPHA-7 ASSOCIATES WITH BETA-1.

C: SUBCELLULAR LOCATION: TYPE I MEMBRANE PROTEIN.

C: ALTERNATIVE PRODUCTS: AT LEAST 3 ISOFORMS; ALPHA-7XIA, ALPHA-7XIB

C: (SHOWN HERE) AND ALPHA-7XIC; ARE PRODUCED BY ALTERNATIVE SPLICING.

C: (SHOWN HERE) AND ALPHA-7XIC; ARE PRODUCED BY ALTERNATIVE SPLICING.

C: (SHOWN HERE) AND ALPHA-7XIC; ARE PRODUCED BY ALPHA-7XIA, MUSCLE.

EXPRESSED IN REPLICATING MYOBLASTS. IN DIFFERENTIATED MUSCLE.

EXPRESSED IN REPLICATING MYOBLASTS. IN DIFFERENTIATED MUSCLE.

C: (ISOFORMS A AND B ARE EXPRESSED AT MYOTENDINOUS AND MEMBROWISCULAR

C: (ISOFORMS A AND B ARE EXPRESSED AT NEUROMUSCULAR JUNCTIONS AND AT EXTRASYNAPTIC SITES.

C: (ISOFORMS A AND B ARE EXPRESSED AT NEUROMUSCULAR JUNCTIONS AND AT EXTRASYNAPTIC SITES.

C: (ISOFORMS A NEW BASELETAL MUSCLE. ISOFORMS A NAD C ARE INDUCED UPON TERMINAL MYOGENIC DIFFERENTIATION; ISOFORM B IS PRESENT ATION.

C: (ISOFORMS AND AT LEAST TWO SITES IN THE EXTRACELLULAR DOMAIN IN REPLICATING CELLS AND DIMINISHES UPON DIFFERENTIATION.

C: (ISOFORMS AND AT LEAST TWO SITES IN THE EXTRACELLULAR DOMAIN IN REPLICATING CELLS AND LINITISHES UPON DIFFERENTIATION.

C: (ISOFORMS AND AT LEAST TWO SITES IN THE EXTRACELLULAR DOMAIN IN REPLICATING CELLS AND LINITISHES UPON DIFFERENTIATION.

C: (ISOFORMS AND AT LEAST TWO SITES IN THE EXTRACELLULAR DOMAIN IN REPLICATING THE INTEGRIN ALLHA CHAIN FAMILY.

C: (ISOFORMS AND AT LEAST TWO SITES IN THE EXTRACELLULAR DOMAIN IN REPLICATING THE INTEGRIN ALLHA CHAIN FAMILY.

C: (ISOFORMS AND AT LEAST TWO SITES IN THE EXTRACELLULAR DOMAIN IN REPLICATION THE INTEGRIN ALLHA CHAIN FAMILY.
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VARSPLIC
                                                                                                                                                                                                                Ziober B.L., Kramer R.H.;
"Identification and characterization of the cell type-specific developmentally regulated alpha7 integrin gene promoter.";
J. Biol. Chem. 271:22915-22922(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1018
         Collo G., Starr L., Quaranta V.;
"A new isoform of the Laminin receptor integrin developmentally regulated in skeletal muscle.";
J. Biol. Chem. 268:19019-19024(1993).
                                                         PARTIAL SEQUENCE FROM N.A. (ISOFORMS STRAIN=C57BL/6 x BALB/C; MEDLINE=93366824; PubMed-8360188;
                                                                                                           MEDLINE=92198982; PubMed=1839357;
Kramer R.H., Vu M.P., Cheng Y.F., Ramos
"Laminin-binding integrin alpha 7 beta
and expression in normal and malignant
cell Regul. 2:805-817(1991).
                                                                                                                                                                                                                                                                                                                                                                                                            Ziober B.L., Vu M.P., Waleh N., Crawford J., "Alternative extracellular and cytoplasmic do alpha 7 subunit are differentially expressed J. Biol. Chem. 268:26773-26783(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             061738; P70350; 088732; Q61737; 088731; Q61741; 
Q0-AuG-2001 (Rel. 40, Created) 
20-AuG-2001 (Rel. 40, Last sequence update) 
20-AuG-2001 (Rel. 40, Last annotation update)
                                                                                                                                                                                                                                                                    STRAIN=C57BL/6 x CBA;
MEDLINE=96394366; PubMed=8798472;
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FFRRNSPSSSFPANYHRAHLAVQPSAMEAGGPGTVGWDSSS
GRSTLRPLYPSTTQ (IN ISOFORM ALPHA-7X1A).
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LGFFKRAKHPEATVPQYHAVKILREDRQQFKEEKTGTIQRS
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beta 1: fund
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1: functional characterization
melanocytes.";
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ADULT HEART, LUNG AND SKELETAL WUSCLE. ISOFORMS CONTAINING SEGMENT
X1 ARE EXPRESSED IN ADULT HEART, LUNG AND IN PROLIFERATING
SKELETAL MYOBLASTS BUT NOT IN ADULT SKELETAL MUSCLE. ISOFORMS
CONTAINING SEGMENT A ARE EXCLUSIVELY FOUND IN SKELETAL MUSCLE.
ISOFORMS CONTAINING SEGMENT A AND BARE EXPRESSED AT
MYOTENDINOUS AND NEUROMUSCULAR JUNCTIONS; ISOFORMS CONTAINING
SEGMENT C ARE EXPRESSED AT NEUROMUSCULAR JUNCTIONS AND AT
EXPRESSED AT NEUROMUSCULAR JUNCTIONS AND AT
EXPRESSED AT NEUROMUSCULAR JUNCTIONS ON THE SEGMENT OF THE STAGE: ISOFORMS ARE DEVELOPMENTALLY REGULATED DURING
FORMATION OF SKELETAL MUSCLE. UNDIFFERENTIATED (REPLICATING)
MYOBLASTS EXPRESS ISOFORMS CONTAINING SEGMENTS A OR
DIFFERENTIATED MYOBLASTS EXPRESS ISOFORMS CONTAINING SEGMENTS A OR
                                                                                                                                                                                                                                                                                                                                                                                               myotubes.";
J. Biol. Chem.
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neuromuscular junction.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Martin P.T., Kaufman S.J., Kramer R.H., Sanes J.R.; "Synaptic integrins in developing, adult, and mutant muscle: selective association of alphal, alpha?A, and alpha?B integrins with the
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Mayer U., Saher G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mayer U., Saher G., Fassler R., Bornemann A. von der Mark H., Miosge N., Poeschl E., von "Absence of integrin alpha 7 causes a novel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE-96197133;
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                                                                                                                                        DOMAIN IN SKELETAL MYOTUBES (IN VITRO).
SIMILARITY: BELONGS TO THE INTEGRIN ALPHA CHAIN FAMILY
SIMILARITY: CONTAINS 7 FG-GAP REPEATS.
                                                                                              SWISS-PROT entry is copyright. It is produced through a collaboration sen the Swiss Institute of Bioinformatics and the EMBL outstation -
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HSSP; P11415; 1403.

MGD; MGI:102700; Itga7.

InterPro; IPR000413; Integrin_alpha.

Pfam; PF01839; KG-GAP; 5.

Pfam; PF00357; integrin_A; 2.

PRINTS; PR01185; INTEGRINA.

R SMART; SM00191; Int.alpha; 5.

R PROSITE; PS00242; INTEGRIN_AlpHA; 1.

R PROSITE; PS00242; INTEGRIN_AlpHA; 1.

W Integrin; Cell adhesion; Receptor; Glycoprotein; Tra

W Signal; Extracellular matrix; Cytoskeleton; Repeat;

M Signal; Extracellular matrix; Cytoskeleton; Repeat;
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INTEGRIN ALPHA-7 LIGHT CHAIN (F
EXTRACELLULAR (POTENTIAL).
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CYTOPLASMIC (POTENTIAL).
FG-GAP 1.
FG-GAP 2.
FG-GAP 4.
FG-GAP 4.
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Matches 8
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MEDLINE-98250181; PubMed-9590299;

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Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
NCBI_TaxID=9606;
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Guicheney P.;
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von der Mark H.,
"The role of extra alpha7-integrin i Exp. Cell Res. 25
            -1- FUNCTION: INTEGRIN ALPHA-7/BETA-1 IS THE PRIMARY LAMININ RECEPTOR ON SKELETAL MYOBLASTS AND ADULT MYOFIBERS. DURING MYOGENIC ON SKELETAL MYOBLASTS AND ADULT MYOFIBERS. DURING MYOGENIC ON SKELETAL MYOBLASTS AND FACILITATE THEIR LOCALIZATION AT LAMININ-RICH SITES OF SECONDARY FIBER FORMATION. IT IS INVOLVED IN THE MAINTENANCE OF THE MYOFIBERS CYTOARCHITECTORE AS WELL AS FOR THEIR ANCHORAGE, VIBBILITY AND FUNCTIONAL INTEGRITY. ISOFORMS ALPHA-7X2B AND ALPHA-7X1B PROMOTE MYOBLAST MIGRATION ON LAMININ 1 AND LAMININ 1 AND ALPHA-7X1B IS LESS ACTIVE ON LAMININ 1 (IN VITRO).

-1- SUBUNIT IS COMPOSED OF AN HEAVY AND A BETA SUBUNIT. THE ALPHA SUBUNIT IS COMPOSED OF AN HEAVY AND A LIGHT CHAIN LINKED BY A DISULFIDE BOND. ALPHA-7 ASSOCIAVES WITH BETA-1.

-1- ALTERNATIVE PRODUCTS: AT LEAST 12 ISOFORMS, ALPHA-7X12B, ALPHA-XXBB,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE-96197133: PubMed-8626012;
Marthn P.T., Kaufman S.J., Kramer R.H., Sanes J.R.;
"Synaptic integrins in developing, adult, and mutant muscle: selective association of alpha1, alpha7A, and alpha7B integrins with the
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Dev. Biol. 174:125-139(1996).
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268:26773-26783(1993).
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PTM: ADP-RIBOSYLATED ON AT LEAST TWO SITES OF THE EXTRACELL DOMAIN IN SKELETAL MYOTUBES (BY SIMILARITY).
DISEASE: DEFECTS IN ITGA? ARE ASSOCIATED WITH A FORM OF CON MYOPATHY; A GROUP OF HETEROGENEOUS MUSCLE DISORDERS WHICH A THOUGHT TO RESULT FROM ABNORMAL MUSCLE DEVELOPMENT. MUSCLE WEAKNESS IS EITHER NON-PROGRESSIVE OR SLOWLY PROGRESSIVE AN APPARENT FROM BIRTH OR EARLY INFANCY.
SIMILARITY: BELONGS TO THE INTEGRIN ALPHA CHAIN FAMILY.
SIMILARITY: CONTAINS 7 FG-GAP REPEATS.
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DEVELOPMENTAL STAGE: IN RENEWING INTESTINAL EPITHELIUM, EXPRESSION OF ISOFORMS CONTAINING SEGMENT B CORRELATES WITH THE ONSET OF ENTERCYTIC DIFFERENTIATION.
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P12068;
01-OCT-1989 (Rel. 12, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
01-NOV-1997 (Rel. 35, Last annotation update)
11-NOV-1997 (Rel. 35, Last sequence update)
11-NOV-1997 (Rel. 35, Last sequence update)
11-NOV-1997 (Rel. 36, Last sequence update)
11-NOV-1997 (Rel. 36, Last sequence update)
11-NOV-1997 (Rel. 36, Last sequence update)
12-NOV-1997 (Rel. 36, Last sequence update)
13-NOV-1997 (Rel. 36, Last sequence update)
14-NOV-1997 (Rel. 36, Last sequence update)
14-NOV-1997 (Rel. 36, Last sequence update)
15-NOV-1997 (Rel. 36, Last sequence 
                                                SEQUENCE FROM N.A.

MEDLINE-9629252; PubMed-8728388;
Yu M., Irwin D.M.;

"Evolution of stomach lysozyme: the pig lysozyme
Mol. Phylogenet. Evol. 5:298-308(1996).
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Q06399;
Q1-OCT-1994
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20-AUG-2001
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StyGene; SG10420; yedD.
Hypothetical protein.
SEQUENCE 141 AA; 15465 MW;
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SEQUENCE OF 19-146
TISSUE=Stomach;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDIINE-93381452; PubMed-8371104;
Raha M., Kihara M., Kawagishi I., Macnab R.M.;
"Organization of the Escherichia coll and Salmonella
Chromosomes between flagellar regions IIIa and IIIb,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1093
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J. Gen. Microbiol. 139:1401-1407(1993).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "Episodic evolution in the stomach lysozymes of ruminants.";

J. Mol. Evol. 28:528-535(1989).

C. 1- FUNCTION: LYSOZYMES HAVE PRIMARILY BACTERIOLYTIC FUNCTION; THOSE IN TISSUES AND BODY FLUIDS ARE ASSOCIATED WITH THE MONOCYTE-

C. MACROPHAGE SYSTEM AND ENHANCE THE ACTIVITY OF IMMUNOGENTS.

C. CATALYTIC ACTIVITY: HYDROLYSIS OF THE 1/4-BETA-LINKAGES BETWEEN HETEROPOLYMERS OF THE PROKARYOTES CELL WALLS.

C. N-ACETYL-D-GLUCOSAMINE AND N-ACETYLMURAMIC ACLD IN PEPTIDOGLYCAN HETEROPOLYMERS OF THE PROKARYOTES CELL WALLS.

C. SUBUNIT: MONOMER.

C. MACSCLLAMEOUS: LYSOZYMES C ARE CAPABLE OF BOTH HYDROLYSIS & TRANSGLYCOSYLATION; THEY SHOW ALSO A SLIGHT ESTERASE ACTIVITY.

THEY ACT RAPIDLY ON BOTH PEPTIDE SUBSTITUTED & UNSUBSTITUTED PEPTIDOGLYCAN & SLOWLY ON CHITIN OLIGOSACCHARIDES.
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                                                                          LYC3_PIG STANDARD; PRT; 148 AA.

P12069;
01-CCT-1989 (Rel. 12, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
01-NOV-1997 (Rel. 35, Last annotation update)
LYSOZYME C-3 PRECURSOR (EC 3.2.1.17) (1,4-BETA-N-ACE Sus scrofa (Pig).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae;
MCBI_TaxID=9823;
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Pfam; Pr00062; lys; 1.
PRINTS; PR00135; LYZLACT.
PRINTS; PR00137; LYSCZYME.
PRINTS; PR00137; LYSCZYME.
SMART; SM00263; LYZ1, 1.
PROSITE; PS00128; LACTALBUMIN_LYSCZYME; 1.
Hydrolase; Glycosidase; Bacteriolytic enzyme; Digestion; Stomach;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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Jolles J., Jolles P., Bowman B.H., Prager E.M.,
Wilson A.C.;
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3.2.1.17) (1,4-BETA-N-ACETYLMURAMIDASE
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BACTERIORHODOPSIN (
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-!- FUNCTION: LYSOZYMES HAVE PRIMARILY BACTERIOLYTIC FUNCTIO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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HSSP; P00695; 2LHM.
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                                             Halobacterium
                                                                  Archaea; Euryarchaeota;
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MISCELLANEOUS: LYSOZYMES C ARE CAPABLE OF BOTH HYDROLYSIS &
TRANSGLYCOSYLATION; THEY SHOW ALSO A SLIGHT ESTERASE ACTIVITY.
THEY ACT RAPIDLY ON BOTH PEPTIDE-SUBSTITUTED & UNSUBSTITUTED
PEPTIDOGLYCAN &, SLOWLY, ON CHITIN OLIGOSACCHARIDES.
SIMILARITY: BELONGS TO FAMILY 22 OF GLYCOSYL HYDROLASES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FUNCTION: LYSOZYMES HAVE PRIMARILY BACTERIOLYTIC FUNCTION; THOSE IN TISSUES AND BODY FLUIDS ARE ASSOCIATED WITH THE MONOCYTE-MACROPHAGE SYSTEM AND ENHANCE THE ACTIVITY OF IMMUNOAGENTS.
CATALYTIC ACTIVITY: HYDROLYSIS OF THE 1,4-BETA-LINKAGES BETWEEN N-ACCTYL-D-GLUCOSAMINE AND N-ACCTYLMURAMIC ACID IN PEPTIDOGLYCAN
                                                                                                                                                                                                                                                                                                                                                      7 LLVLALL 13
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1 LLVLALL 10
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e; Glycosidase; Bacteriolytic enzy
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P., Bowman B.H., Prager E.M., Stewart C.-B.
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annotation
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BY SIMILARITY.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                This SWISS-PROT entry is copyright. It is produced through a collab between the Swiss Institute of Bioinformatics and the EMBL outset the European Bioinformatics Institute. There are no restrictions use by non-profit institutions as long as its content is in modified and this statement is not removed. Usage by and for commodified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            duplication and functional differentiation.";
J. Mol. Biol. 285:163-174(1999).
-i- FUNCTION: BACTERIORHODOPSIN IS A LIGHT-DRIVEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ihara K., Umemura T., Katagiri I., Kita
Kimura Y., Mukohata Y.;
"Evolution of the archaeal rhodopsins:
                                                                                                                          Bacillus subtilis.
Bacteria; Firmicutes; Ba
Bacillus/Staphylococcus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PROSITE; PS00950; BACTERIAL_OPSIN_1; 1.
PROSITE; PS00327; BACTERIAL_OPSIN_RET; 1.
Ion transport; Photoreceptor; Transmembrane;
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Pfam; PF01036; Bac_rhodopsin;
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oxidase
         the gox
          "Molecular cloning,
the dox operon from
                                   Glaser
                                                 Santana M.,
                                                             STRAIN-168;
MEDLINE-92268053;
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                                               58053; PubMed=1316894; Kunst F., Hullo M.F.,
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         sequencing, and physiological characterization Bacillus subtilis encoding the aa3-600 quinol
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hodopsin; 1.
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us group; Bacillus.
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RETINAL CHROMOPHORE (BY SIMILARITY).

RETINAL CHROMOPHORE (BY SIMILARITY).
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HELIX A (POTENTIAL).
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InterPro; IPR001505; COX2.
InterPro; IPR002429; Cyt.c_ox_2.
Pfam; PF00116; COX2; 1.
PRINTS; PR01166; CYCOXIDASEII.
PROSITE; PS000131; COX2; 1.
PROSITE; PS000131; PROKAR, LIPOPROTEIN; 1.
OXIGORAGUCEASe; Electron transport; Transm
Lipoprotein; Complete proteome.
SIGNAL

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CONFLICT
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MEDINE-9609139; PubMed-7575098;
ILemma E., Simon J., Schagger H., Kroger A.;
"Properties of the menaquinol oxidase (Qox) and of qox deletion mutants of Bacillus subtilis!",
Arch. Microbiol. 163:432-438(1995).
-1- PUNCTION: CATALYZES QUINOL OXIDATION WITH THE CONCOMITANT REDUCTION OF OXYGEN TO WATER. MAJOR COMPONENT FOR ENERGY CONVERSION DURING VEGETATIVE GROWTH. SUBUNIT II TRANSFERS THE ELECTRONS FROM A QUINOL TO THE BINUCLEAR CENTER OF THE CATALYTIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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MEDLINE-95020537; PubMed-7934828;
Glaser P., Kunst F., Arnaud M., Coudart M.P., Gonzales W.,
Hullo M.F., Ionescu M., Lubochinsky B., Marcellino I., Moszer I.,
Presecan E., Santana M., Schheider E., Schweizer J., Vertes A.,
Rapoport G., Danchin A.;
"Baccillus subtilis genome project: cloning and sequencing of the 97
kb region from 325 degrees to 333 degrees.";
Mol. Microbiol. 10:371-384(1993).
                                                                                                                                                                                                                                                                                              SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL; M86548; AAA22686.1; ALT_INIT.
EMBL; X73124; CAA51593.1; ALT_INIT.
EMBL; Z99123; CAB15843.1; ALT_INIT.
PIR; A38129; A38129.
HSSP; P18400; ICYW.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE OF 27-43, AND CHARACTERIZATION.
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                                          7 LLVLALL 13
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12 LLVLALL 18
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SUBGULT I.
SUBCELLULAR LOCATION: INTEGRAL MEMBRANE PROTEIN.
SIMILARITY: SOME, TO MITOCHONDRIAL OR BACTERIAL COX2 SUBGUITS.
BUT LACK HEME-BINDING DOMAIN.
                                                                                                                                                     Similarity
7; Conser
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ilarity 100.0%;
Conservative
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Pred. No. 19;
0; Mismatches
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C701B14076B74A8D CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Transmembrane; Signal;
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o. 19;
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databases
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      RESULT 15
YE71_HAEIN
ID YE71_H
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C1B2_CAMPO
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GN CDLB2_T
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SEQUENCE
YE71_HAEIN STANDARD; PRT; 337 AP
Q57130; 005065;
01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
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DOMAIN
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InterPro; IPR003597; Ig_cl.
Pfam; PF00047; ig 1.
SMART; SM00407; IGcl; 1.
SMART; SM00407; IGcl; 1.
Glycoprotein; Signal; Transmembrane; Immunoglobulin domain;
Multigene family.
Interpretation
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STAIN-HARTLEY, AND NIH 2; TISSUE-Thymus;
STAIN-HARTLEY, ADD NIH 2; TISSUE-Thymus;
MEDLINE-20021845; PubMed-10553074;
Dascher C.C., Hiromatsu K., Naylor J.W., Brauer P.P., Brown K.A.,
Storey J.R., Behar S.M., Kawasaki E.S., Porcelli S.A., Brenner M.B.,
LeClair K.P.,
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Q9QZZ1;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LECLAIR K.P.; "Conservation of a CD1 multigene family in the guinea pig.";
J. Immunol. 163:5478-5488(1999),
-i- FUNCTION: NOT KNOWN.
-i- SUBUNIT: ASSOCIATES NON-COVALENTLY WITH BETA-2-MICROGLOBULIN SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Cavia porcellus (Guinea pig).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Hystricognathi; Caviidae; Cavia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -1- SUBCELLULAR LOCATION: TYPE I MEMBRANE PROTEIN (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    20-AUG-2001 (Rel. 40, Created)
20-AUG-2001 (Rel. 40, Last sequence update)
20-AUG-2001 (Rel. 40, Last sequence update)
20-AUG-2001 (Rel. 40, Last annotation update)
7-CELL SURFACE GLYCOPROTEIN CDIB2 PRECURSOR (CD1-B2 ANTIGEN).
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T-CELL SURFACE GLYCOPROTEIN
EXTERCELLULAR (POTENTIAL).
POTENTIAL.
CYTOPLASMIC (POTENTIAL).
BY SIMILARITY.
BY SIMILARITY.
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                                                                                                                                                                                                                                                                                                                                                                                                                                          Pfam; PF01032; FecCD_family; 1.
ProDom; PD001557; FecCD; 1.
PROSITE; PS00402; BPD_TRANSP_INN_MEMBR; FALSE_NEG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL; U32825; AAC23119.1; -. TIGR; HI1471; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 influenzae Rd.";
Science 269:496-512(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRAIN-RD / KW20 / ATCC 51907;
MEDLINE-95350630; PubMed-7542800;
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                                                                                                                                                                                                                                                                                                                                                                                                                   Hypothetical protein; Transport;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        InterPro; IPR000515; BPD_transp.
InterPro; IPR000522; FecCD.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -1- FUNCTION: PROBABLY PART OF A BINDING-PROTEIN-DEPENDENT TRANSPORT SYSTEM. PROBABLY RESPONSIBLE FOR THE TRANSLOCATION OF THE SUBSTRATE ACROSS THE MEMBRANE.
-1- SUBCELLULAR LOCATION: INTEGRAL MEMBRANE PROTEIN. INNER MEMBRANE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bacteria; Proteobacteria; gamma subdivision; Pasteurellaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Haemophilus influenzae
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230
                    17 ALGVKMA 23
                                                                                 Local Similarity tes 7; Conserv
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SIMILARITY: WITH INTEGRAL MEMBRANE COMPONENTS OF OTHER BINDING-PROTEIN DEPENDENT TRANSPORT SYSTEMS, BELONGS TO THE FECCD
ALGVKMA 236
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OM protein - protein search, using sw model
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(without alignments)
590.872 Million cell updates/sec

Title: Perfect score: US-09-662-784-6

Sequence: DTMRGALLYLALLYTQALGY.....

Scoring table: OLIGO Gapop 60.0 , Gapext 60.0 .....CMGEAVQNTVEDLKLNTLGR 111

Searched:

Word size : 0

219241 seqs, 76174552 residues

Total number of hits satisfying chosen parameters: 219241

Minimum DB Maximum DB seq seq length: 0 length: 2000000000

Post-processing: Listing first 45 summaries

Database :

PIR\_68:\*

pir1:\*
pir2:\*
pir3:\* pir4:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

#### SUMMARIES

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him other land	bo-type ubiquinol	probable phosphati	hypothetical prote		17.0	m.	hypothetical prote	bacteriorhodopsin	hypothetical prote		_	_	•	hypothetical prote	hypothetical proce	m	$\Box$		alph	probable MFS trans	N-acetylglucosamin	<u> </u>		a			rin alpha		major allergen Fel	Description

# ALIGNMENTS

# R:Morgenstern, J.P.; Griffith, I.J.; Brauer, A.W.; Rogers, B.L.; Bond, J.F.; Chapman Proc. Natl. Acad. Sci. U.S.A. 88, 9500-9594, 1991 A;Title: Amino acid sequence of Fel dI. the major allergen of the domestic cat: protactions number: A56413; MUID:92052157 major allergen Fel dI chain 2 precursor - cat C;Species: Felis silvestris catus (domestic cat) C;Date: 11-Aug-1995 #sequence\_revision 11-Aug-1995 #text\_change 01-Dec-2000 C;Accession: C56413; dc1445 RESULT C56413 A; Molecule type: mRNA A; Residues: 1-109 < MO A; Status: preliminary A; Accession: C56413

A;Reference number: JC1126; MUID:92241678
A:Reference Timber: JC1126; MUID:92241678 R;Griffith, I.J.; Craig, Gene 113, 263-268, 1992 A;Title: Expression and 1-109 < MOR> s :: Pollock, J.; Yu, X.B.; Morgenstern, J.P.; Rogers, B.L.

A; Status: nucleic acid sequence not shown

A; Molecule type: mRNA A; Residues: 18-109 <GRI>

A;Experimental source: salivary gland C;Keywords: glycoprotein F;1-17/Domain: signal sequence #status predicted <SIG>F;50/Binding site: carbohydrate (Asn) (covalent) #status predicted

Query Match Length 109,

Matches 109; Best Local Similarity Conservative 98.2%; 100.0%; Score 109; DB 2; L; Pred. No. 7.7e-101; Mismatches ·Indels 0; Gaps

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В QΥ

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RESULT JC1127

major allergen chain 2 precursor, short form - cat C;Species: Felis silvestris catus (domestic cat) C;Species: Felis silvestris catus (domestic cat) C;Date: 31-Dec-1993 #sequence\_revision 31-Dec-1993 #text\_change 05-Nov-1999 C;Accession: JC1127 R;Griffith, I.J.; Craig, S.; Pollock, J.; Yu, X.B.; Morgenstern, J.P.; Rogers, B.L. Gene 113, 263-268, 1992

Gene 113, 263-268, 1992
A; Title: Expression and genomic structure of the genes encoding FdI, the major allerg A; Reference number: JC1126; MUID:92241678

```
A; Réference number: S40147
A; Accession: S40149
A; Status: preliminary
A; Molecule type: mRNA
A; Residues: 1-108 <SON>
A; Cross references: EMBL: X74294; N
C; Superfamily: integrin alpha-2b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Accession: JC1127
A;Mclecule type: DNA
A;Residues: 1-107 - GGRI>
A;Residues: 1-107 - GGRI>
A;Cross-references: GB:X62478; NID:g395406; PIDN:CAA44345.1; PID:g395407
A,Experimental source: skin
C;Genetics:
alpha-7A integrin - mouse (fragment)
c; Species: Mus musculus (house mouse)
c; Species: Mus musculus (house mouse)
c; Species: Mus musculus (house mouse)
c; Date: 02-Jul-196 #sequence_revision (02-Jul-1996 #text_change 29-Sep-1999
c; Accession: I6187
R; Ziober, B.L.; Vu, M.P.; Waleh, N.; Crawford, J.; Lin, C.S.; Kramer, R.H.
A; Title: Alternative extracellular and cytoplasmic domains of the integrin alpha 7
A; Reference number: A49691; MUID:94075378
A; Accession: I6187
A; Accession: I6187
A; Accession: I6187
A; Status: preliminary; translated
A; Molecule type: mRNA
A; Residues: I-129 <RES>
A; Cross-references: GB:L23421; NID:9431417; PIDN:AAA16598.1; PID:9450648
c; Superfamily: integrin alpha-2b chain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 integrin alpha-7C chain - rat
C:Species: Rattus norvegicus (Norway rat)
C:Date: 06-Jan-1995 #sequence_revision 06-Jan-1995 #text_change 29-Sep-1999
C:Accession: $40149
R:Song, W.K.; Wang, W.; Sato, H.; Bielser, D.; Kaufman, S.
submitted to the EMBL Data Library, July 1993
A:Description: Expression of alpha 7 integrin cytoplasmic domains during skinosphotases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C:Genetics:
A:Gene: Ch2
A:Introns: 21/1: 81/3
A:Introns: 21/1: 81/3
A:Introns: 21/1: 81/3
A:Introns: 21/2: 81/3
A:Introns: 21/2: 81/3
C:Keywords: glycoprotein
C:Keywords: glycoprotein
C:Keywords: glycoprotein
C:Keywords: glycoprotein
C:Keywords: glycoprotein
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Best Local Similarity 100.0%;
Matches 8; Conservative
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Best Local Similarity 100.0%;
Matches 81; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          79 LLVLALLV 86
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NID:g437912; PIDN:CAA52347.1; PID:g437913
chain
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Pred. No. 1.5
0; Mismatches
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Pred. No. 4.9e-73;
D; Mismatches 0;
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A;Molecule type: mRNA
A;Residues: 1-85,105-139 <RO2>
A;Cross-references: GB:L05924; NID:g213207; PIDN:AAA49268.1; PID:g213208
A;Cross-references: GB:L05924; NID:g213207; PIDN:AAA49268.1; PID:g213208
A;Cross-references: GB:L05924; NID:g213207; PIDN:AAA49268.1; PID:g213208
A;Cross-references: GB:L05924; NID:g213207; PIDN:AAA49268.1; PID:g213208
A;Note: sequence extracted than B45051; we have arbitrari
C;Comment: These forms are encoded by a different gene than B45051; we have arbitrari
C;Superfamily: lamprin
C;Repvords: alternative splicing; cartilage; extracellular matrix
F;1-19/Domain: signal sequence #status predicted <NAT1>
F;20-139/Product: lamprin 2, long splice form #status predicted <NAT2>
F;20-85,105-139/Product: lamprin 2, short splice form #status predicted <NAT2>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                lamprin 2 precursor, long splice form - sea lamprey
N;Alternate names: lamprin L-0.9-12
N;Contains: lamprin 2 precursor, short splice form (lamprin L-0.9-10)
C;Species: lamprin 2 precursor, short splice form (lamprin L-0.9-10)
C;Species: Petromyzon marinus (sea lamprey)
C;Date: 30-Apr-1993 #sequence_revision 30-Apr-1993 #text_change 22-Jun-1999
C;Accession: C45051; A45051; Sitarz, E.; Maiti, A.; Rawat, M.; Youson, J.H.; Keeley, F
R;Robson, P.; Wright, G.M.; Sitarz, E.; Maiti, A.; Rawat, M.; Youson, J.H.; Keeley, F
J. Biol. Chem. 268, 1440-1447, 1993
A;Title: Characterization of lamprin, an unusual matrix protein from lamprey cartilag
A;Reference number: A45051; MUID:93123269
A;Reference number: A45051; MUID:93123269
A;Rocession: C45051
A;Rocession: C45051
A;Rocession: C45051
A;Rocession: C45051
A;Rocession: A15071

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Best Local Similarity
Thes 8; Conserv
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ilarity 100.0%;
Conservative (
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Pred. No.
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o. 1.8;
Length 139
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A;Réference number: S40147
A;Accession: S40148
A;Status: preliminary
A;Status: preliminary
A;Molecule type: mRNA
A;Molecule type: mRNA
A;Residues: 1-148 <SON>
A;Cross-references: EMBL:X74293; NID:g437910; PIDN:CAA52346.1; PID:g437911
C;Superfamily: integrin alpha-2b chain integrin alpha-7A chain - rat C:Species: Rattus norvegicus (Norway rat) C:Date: 06-Jan-1995 #sequence\_revision 06-Jan-1995 #text\_change 29-Sep-1999 ₽ Qy R;Song, W.K.; Wang, W.; Sato, H.; Bielser, D.; Kaufman, S. submitted to the EMBL Data Library, July 1993 a;Description: Expression of alpha 7 integrin cytoplasmic domains during skeletal mus Accession: S40148 Matches Query Match Best Local 6 ALLVLALL 13 7 ALLVLALL 14 Similarity 8; Conser ilarity 100.0%; Conservative 0; Score 8; Pred. No. Mismatches DB 1; 0 Indels 0, Gaps 0

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7 LLVLALLV 14

Ouery Match 7.2%; Score 8; DB Best Local Similarity 100.0%; Pred. No. 2; Matches 8; Conservative 0; Mismatches

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Indels

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probable membrane protein - Cyanophora paradoxa cyanelle

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A;Cross-references: DDBJ:D87820; NID:g2541899; PIDN:BAA22834.1; PID:d1023704; PID:g2541A;Experimental source: strain 1148A
C;Comment: This enzyme deacetylates N-acetylglucosamine, one component of chitin, to gluc;Genetics:
                                                                                                                                                                                                                                                                                                                                     R:Tamano, N.; Oura, N.; Wang, J.; Fujishima, S.
Biosci. Biotechnol. Biochem. 61, 1349-1353, 1997
A;Title: Cloning and sequencing of the genes for N-acetylglucosamine use that construct A;Reference number: JC5649; MUID:97446530
A;Accession: JC5649
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Status: translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues: 1-299 <STI>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          submitted to the EMBL Data Library, July 1995
A;Description: Nucleotide sequence of the cyanelle genome from Cyanophora paradoxa.
A;Reference number: 215840
A;Accession: T06960
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N;Alternate names: hypothetical protein psaC region C;Species: cyanelle Cyanophora paradoxa C;Decies: cyanelle Cyanophora paradoxa C;Date: 30-Apr-1999 #sequence_revision 30-Apr-1999 #text_change C;Accession: T06960; PS0372
R;Stirewalt, V.L.; Michalowski, C.B.; Luffelhardt, W.; Bohnert,
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                                                                                                                                                                                A;Gene: nagA
C;Keywords: 1
                                                                                                                                                                                                                                                                                                       A; Molecule type: DNA
A; Residues: 1-378 < YAM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   K;Note: non-ol strain 1148A
C;Date: 28-Oct-1997 #sequence_revision 28-Oct-1997
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JC5649
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A; Residues: 138-299 < RHI>
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Best Local S
Matches 8
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Best Local S
Matches 8
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312
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                                    EAVQNTVE 102
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8; Conser
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                                                                              Conservative
                                                                                               7.2%;
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                                                                          b; Score 8; DB 2
b; Pred. No. 4.4
0; Mismatches
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Pred. No.
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                                                                                                                Length 378;
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R;Heidelberg, J.F.; Eisen, J.A.; Nelson, W.C.; Clayton, R.A.; chardson, D.; Ermolaeva, M.D.; Vamathevan, J.; Bass, S.; Qin, I., R.R.; Mekalanos, J.J.; Venter, J.C.; Fraser, C.M.
Nature 406, 477-483, 2000
A;Title: DNA Sequence of both chromosomes of the cholera patho A;Reference number: A82035; MUID:20406833
A;Accession: E82254
A;Status: preliminary
integrin alpha chain - rat (fragment) c;Specles: Rattus norvegicus (Norway rd C;Date: 22-Jan-1994 #sequence_revision C;Accession: S38783; S23600 R;Kaufman, S.J. submitted to the EMBL Data Library, Mai A;Reference number: S38783
                                                                                                                 RESULT
S38783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C;Accession: E82951
R;Stover, C.K.; Pham, X.Q.; Erwin, A.L.; Madman, S.; Yuan, Y.; Brody, L.L.; Coulter,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Molecule type: DNA
A; Residues: 1-378 <HEI>
A; Cross-references: GB:
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A; Gene: PA
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A; Residues: 1-401 <STO>
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A; Accession: E82951
A; Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .; Lory, S.; Olson, M.V.
Nature 406, 959-964, 2000
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A;Map position:
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C;Accession: E82254
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                                                                                                                                                                                                                                                                                                                                                             A; Experimental source: strain
                                                                                                                                                                                                                                                                                                                                                                           A;Cross-references: GB:AE004967; GB:AE004091; NID:g9951884; PIDN:AAG08933.1; GSPDB:GN
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Best Local S
Matches 8
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Best Local S
Matches 8
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nes 8; Conserv
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|LLVLALLV 288
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ce: serogroup
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100.0%; Pred. No
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                                                                                                                                                                                                                                            0;
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Pred. No.
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r, S.N.; Folger,
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El Tor
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H.; Dragoi,
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Larbig,
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March 1992

rat) on 14-Jul-1995

#text\_change 29-Sep-1999

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Integrin alpha-7 chain precursor human
C.Speciles: Homo sapiens (man)
C.Speciles: Homo sapiens (man)
C.Speciles: Homo sapiens (man)
C.Speciles: Homo sapiens (man)
C.Speciles: Homo sapiens (man)
C.Speciles: Homo sapiens (man)
C.PACCESSION: JC5950; JC5951; A56839; S40147
R.;Leung E.; Lim, S.P.; Berg, R.; Kang, Y.; Ni, J.; Wang, S.; Krissansen, G.W.
Biochem. Biophys. Res. Commun. 243, 317-325, 1998
Biochem. Biophys. Res. Commun. 243, 317-325, 1998
A.;Title: A novel extracellular domain variant of the human integrin alpha 7 sul
A.;Accession: JC5950; MUID: 98139911
A.;Accession: JC5950; MUID: 98139911
A.;Status: preliminary
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A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-1106 <KAUD
A;Cross-references: EMBL:X65036; NID:g56392; PIDN:CAA46170.1; PID:g56393
A;Cross-references: EMBL:X65036; NID:g56392; PIDN:CAA46170.1; PID:g56393
A;Cross-references: EMBL:X65036; NID:g56392; PIDN:CAA46170.1; PID:g56393
A;Coll Biol: 117, 643-657, 1992
A;Title: H36-alpha7 is a novel integrin alpha chain that is developmentally regulated (A;Reference number: S23600)
A;Accession: S23600
                      A; Molecule type: mRNA
A; Residues: 1-657,733-1137
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A;Molecule type: mRNA
A;Residues: 1-1135 <RESS
A;Cross-references: GB:L23423; NID:g431415; PIDN:AAA16600.1; PID:g431416
C;Superfamily: integrin alpha-2b chain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Reference number: A49891; MUID:94075378
A;Accession: I61186
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A;Title: Alternative extracellular and cytoplasmic domains of the integrir
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C;Species: Mus musculus (house mouse)
C;Dete: 02-Jul-1996 #sequence_revision 02-Jul-1996 #text_change 29-Sep-1999
C;Accession: I61186
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A;Residues: 1-1137 <LEU1>
A;Cross-references: GB:AF032108;
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A; Residues: 1-116, 'R', 118-349, 'D' 351-804, 'R', 806, 'V', 808-1106
A; Cross_references: EMBL: X65036
A; Cross_references: EMBL: X65036
A;Residues: 1-657,733-1137 <LEU2>
A;Cross-references: GB:AF032108
                                                                      A;Status: preliminary
                                                                                                A; Accession: JC5951
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Best Local Similarity 100.
Chas 8; Conservative
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Best Local :
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                                                                                                                       NID:g2897115; PIDN:AAC39708.1; PID:g2897116
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hypothetical protein F14F8.8 - Caenorhabditis elegans C:Species: Caenorhabditis elegans C:Date: 15-Oct-1999 #sequence\_revision 15-Oct-1999 #t.C:Accession: T20911 R:Lloyd, C.

15-Oct-1999 #text\_change 15-Oct-1999

submitted to the EMBL Data Library,

March 1997

T20911

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R;Duffort, O.A.; Carreira, Tmmunol. 28, 301-309,
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A;Gene: GDB:ITGA7
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A;Gene: GDB:ITGA7
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A;Gene: GDB:ITGA7
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A;Gene: GDB:ITGA7
A;Gene: GDB:ITGA7
C;Gene: GDB:
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c;Species: Felis silvestris_catus_(domestic cat)
c-parte: 12-May-1994 #sequence_revision_12-May-1994 #text_change 12-May-1994
c;Accession: B53283
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A;Residues: 664-666,668-688,690-825,'X',827-839,'D',841-946,'H',94
A;Residues: 664-666,668-68B,:X74295; NID:9437781
A;Cross-references: EMBL:X74295; NID:9437781
R;Song, W.K.; Wang, W.; Sato, H.; Bielser, D.; Kaufman, S.
submitted to the EMBL Data Library, July 193
A;Description: Expression of alpha 7 integrin cytoplasmic domains
A;Description: Expression of alpha 7 integrin cytoplasmic domains
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A;Residues: 1061-1137 <SON>
A;Cross-references: EMBL:X74295; NID:g437781; PIDN:CAA52348.1; PID:g437782
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A;Title: Localization of the alpha7 integrin gene (1 A;Reference number: A56839
A;Accession: A56839
RESULT 15
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A; Accession: S40147
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Best Local S
Matches 7
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Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Genetics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1049 LLVLALLV 1056
                                                                                                                                          27 PIFYDVF 33
                                                                                                                                                                                                                                            Local Similarity es 7; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7 LLVLALLV 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity les 8; Conserv
                                                                                                     8 PIFYDVF 14
                                                                                                                                                                                                                                            ilarity 100.0%;
Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               J.; Nitti, G.;
1991
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                                                                                                                                                                                                                                                6.3%; Score 7; DB:
100.0%; Pred. No. 3.
ive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 8; DB 2; Pred. No. 11; 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   integrin gene (ITGA7) on
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                                                                                                                                                                                                                                                                                                             Length 20;
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A;Reference number: Z19346
A;Accession: T20911
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Cross-references: EMBL:Z92782; PIDN:CAB07183.1; GSPDB:GN00023; CESP:F14F8.8
A;Cross-references: EMBL:Z92782; PIDN:CAB07183.1; GSPDB:GN00023; CESP:F14F8.8
C;Genetics: A;Experimental source: clone F14F8
C;Genetics: CESP:F14F8.8
A;Gene: CESP:F14F8.8
A;Map position: 5
A;Introns: 16/3; 46/3

Ouery Match
Best Local Similarity 100.0%; Pred. No. 11;
Best Local Similarity 100.0%; Pred. No. 11;
Matches 7; Conservative 0; Mismatches 0; Gaps 0;
Oy 7 LLVLALL 13
Db 5 LLVLALL 11
Search completed: May 7, 2002.12:18:15
Search completed: May 7, 2002.12:18:15
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